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ACKNOWLEDGEMENTS

This volume is dedicated to the memory of the late Professor Fazand Ali Durrani, Vice-Chancellor of Peshawar University, who provided the vision and inspiration for this collaborative project together with Professor Farid Khan and Dr Raymond Allchin of Cambridge University. Professor Durrani's energy and dedication led to the creation of one of the strongest Departments of South Asian Archaeology at Peshawar and endowed it with a superb University museum.

We are grateful to the staff and students of the University of Peshawar and its Department of Archaeology for their continual support and assistance. In particular, we would like to acknowledge Professor Taj Ali, Professor Farid Khan, Mr Gul Rahim Khan, Dr Mohammad Nasim Khan, Dr Shahn Nazar Khan, Mr Mohammad Naeem Qazi, Professor Abdur Rehman, Mr Nidaullah Sehrai, Mr Ibrahim Shah, Professor Farooq Swati, Mr Mohammad Naeem and Mr Asad Ali.

We would also like to thank the following individuals for their help and invaluable advice: Dr Raymond Allchin, Dr Bridget Allchin, Sir Nicholas Barrington, Professor David Bivar, Professor Pierfrancesco Callieri, Sir David Dane, Professor A.H. Dani, Professor Reinhard Dittmann, Dr M.U. Erdosy, Dr Ian Glover, Mr M.A. Halim, Mr Abdul Haq, MBE, Dr Himayatullah, Mr Dominic Jermey, Professor Mark Kenoyer, Dr Mohammad Ashraf Khan, Mr Mohammad Bahadur Khan, Mr Neil Kreitman, Professor Richard Meadow, Dr Mohammad Rafique Mughal, Mr Jamil Amjad Orakzai, Mr Les Phillips, Professor Giorgio Stacul and Professor Willem Vogelsang.

A great debt of gratitude is owed to the members of the field teams of staff and students from the Universities of Peshawar, Bradford and Cambridge who worked at the site with villagers from Charsadda and Shaikhan Dheri. Whilst there are too many to name individually, in particular we would like to thank the following: Steve Cheshire, BSc; Mukhtar Ali Durrani, MA; Briece Edwards, BA; Mohammad Haneef, MA; Gul Rahim Khan, MA; Shakirullah Khan, BSc; Dr John McGinnis; Muhammad Naeem, MA; Mohammad Naeem Qazi, MA; Andy Towle, BSc; and Dr Ruth Young.

We would also like to acknowledge the efforts of the lab teams and experts who have helped prepare the field data for publication, including: Dr Cathy Batt; Steve Cheshire, BSc; Mukhtar Ali Durrani, MA; Briece Edwards, BA; Dr Derek Kennet; Gul Rahim Khan, MA; Shakirullah Khan, BSc; Dr John McGinnis; Dr Gerry McDonnell; Muhammad Naeem, MA; Dr Cameron Petrie; Seth Priestman, MA; Mohammad Naeem Qazi, MA; Dr Armin Schmidt; and Dr Ruth Young. We are very grateful to Dr Alejandra Gutiérrez for her work as copy editor and for seeing this volume through to press.

Finally, we would like to thank the late Professor Fazand Ali Durrani, Professor Roy Hodson and the late Mrs Sylvia Schofield (née Matheson), all members of Wheeler's 1958 Charsadda excavation team, for agreeing to discuss their experiences in the field. Mrs Schofield very kindly sent a number of her photographs from 1958 with permission to reproduce them in this volume.

The financial support of the following bodies is also gratefully acknowledged: the Arts and Humanities Research Council, the British Academy, the Ancient India and Iran Trust, the McDonald Institute for Archaeological Research, the University of Peshawar, Durham University, Bradford University, the British Council, the Stein-Arnold Fund and the Society for South Asian Studies.

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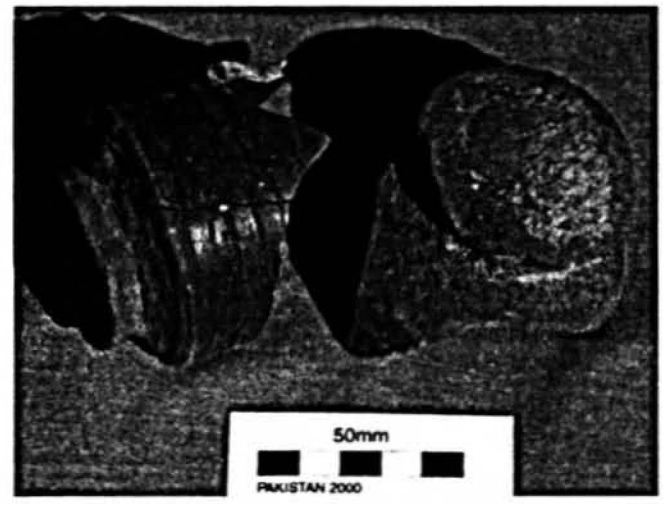

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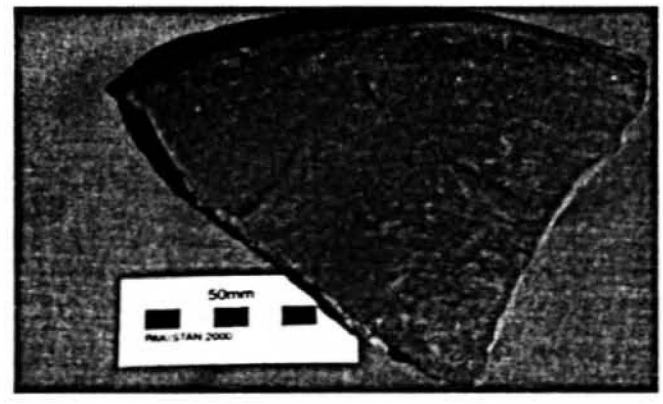

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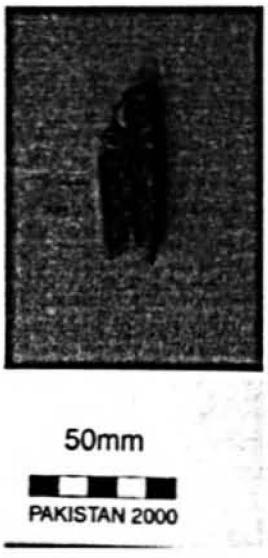

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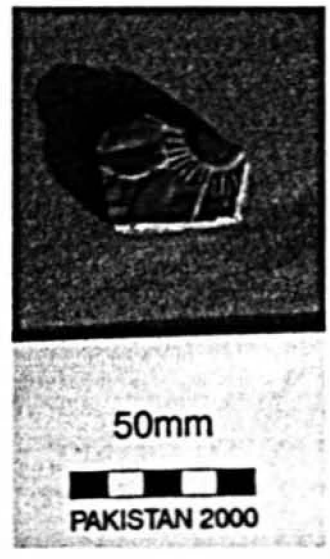

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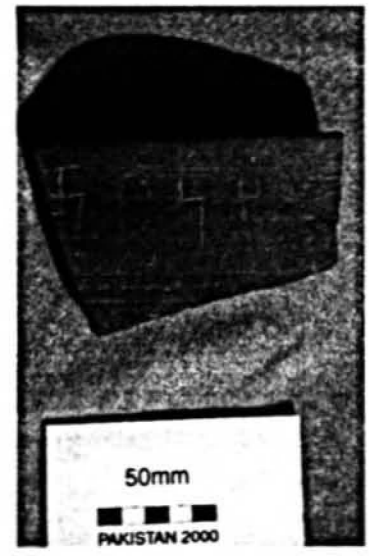

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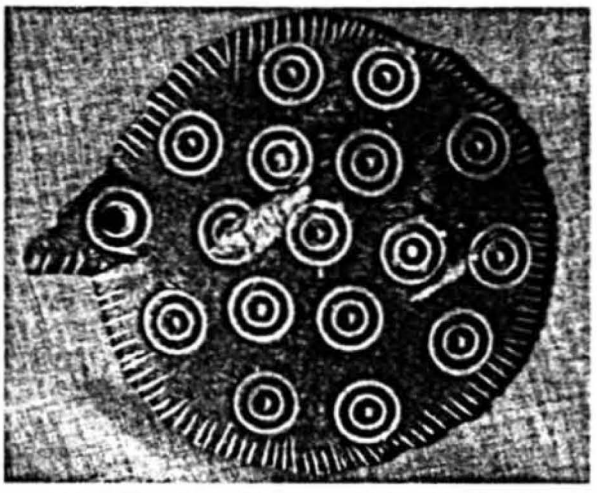

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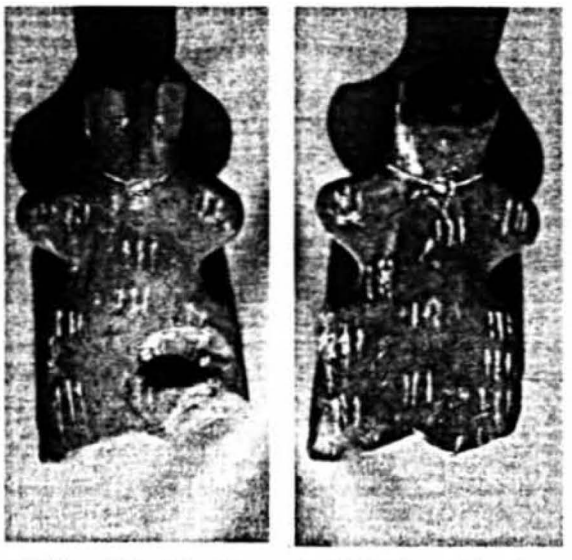

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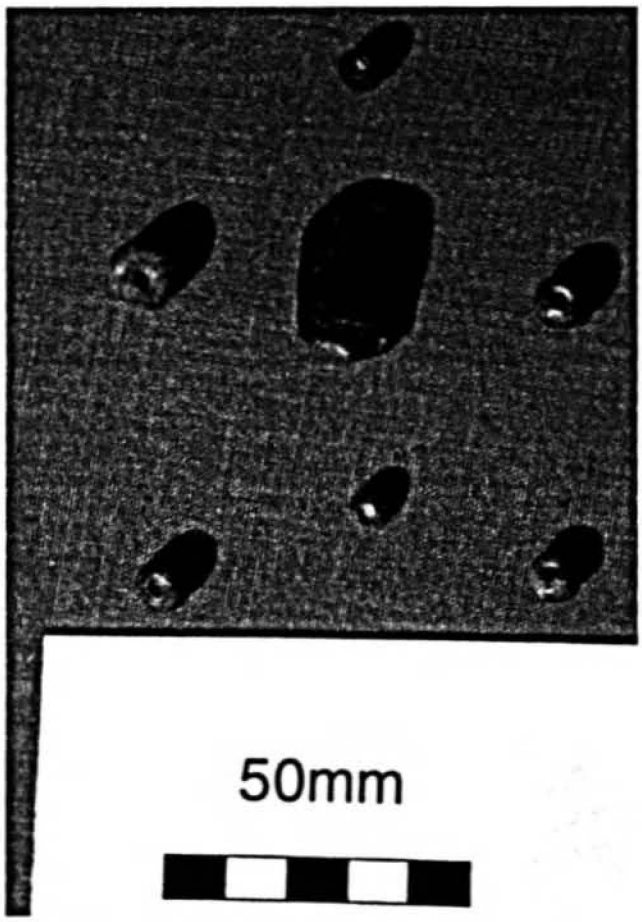

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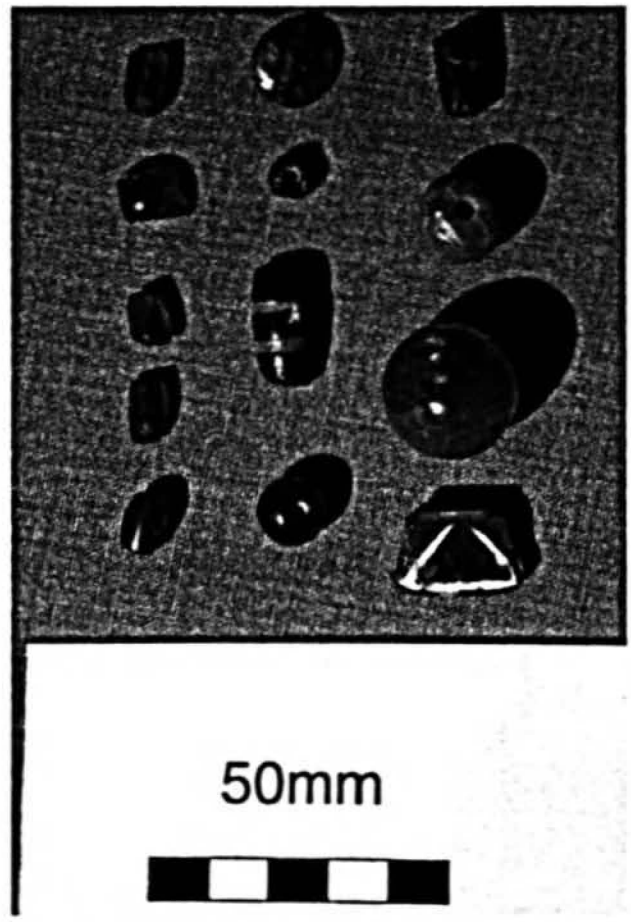

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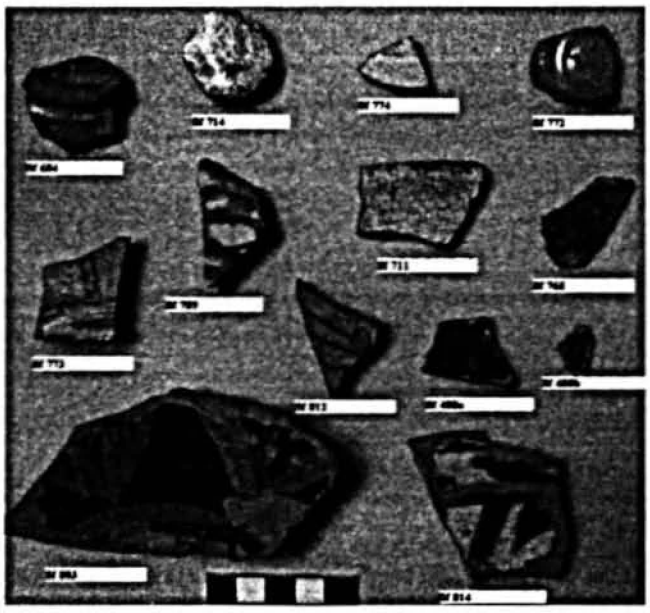

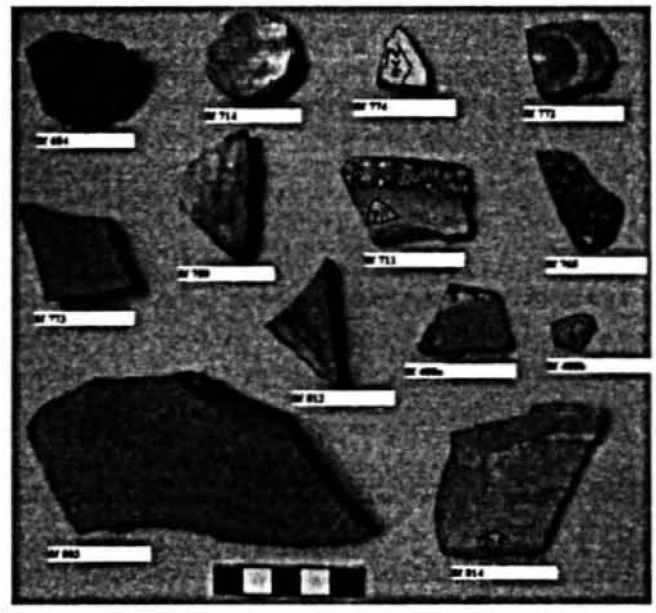

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CHAPTER 1

INTRODUCTION

Robin Coningham & Ihsan Ali

The Bala Hisar of Charsadda is a 23m high mound covering an area of some 25 hectares close to the confluence of the Swat and Kabul rivers in North West Frontier Province's Vale of Peshawar (Map 1) (Plates 1.1 & 1.2). Astride one of the arteries of the Silk Road, the *uttarapatha*, the mountain passes to its north and west link south Asia with central and western Asia (Map 2). Strewn with thousands of ceramic sherds, cobbles and brickbats, the Bala Hisar was identified in 1863 as the city of Pushkalavati, one of the ancient capitals of Gandhara (Cunningham 1864). Although not as formally investigated as Taxila to its south-east, it has been subject to antiquarian and archaeological interest for over 100 years on account of its historical links with the Achaemenid Empire and Alexander the Great. The focus of this research may have changed significantly over time, mirroring broader methodological and theoretical changes, but all researchers have attempted to identify when this great tell site was founded and occupied, and whether there is evidence of Alexander's siege of the site. These issues are not merely of interest to ancient historians but are of great interest to archaeologists of both southern and western Asia as the origins of South Asia second urbanisation are also under scrutiny, in Sir Mortimer Wheeler's words (1950: 51): 'The outstanding importance of Charsadda lies in its earlier phases, when it was a metropolitan centre of Asiatic trade and meeting-place of oriental and occidental cultures'. Indeed, most archaeologists would agree that the Bala Hisar of Charsadda and Taxila are amongst the earliest cities that emerged during the subcontinent's second urbanisation (Allchin 1990; 1995). However, whilst some scholars have interpreted this pattern as evidence of the colonisation and urbanisation of the north-west region by the Achaemenids (Wheeler 1962), others have suggested that these urban forms emerged through internal dynamics prior to the expansion of the Achaemenid Empire in the 6th century BC (Coningham 1995). These 'earliest phases', however, proved extremely elusive to the first excavators of the Bala Hisar as both Garrick and Marshall opened up trenches on the summit of the mound. Whilst Garrick only exposed late mediaeval and modern structures close to the surface in 1883, Marshall drove his trenches down to depths of 6.5m in 1903 but still failed to identify layers earlier than the Kushan period. As retold by Wheeler, to his own advantage, Marshall appears to been struck by the similarity of the Bala Hisar to the Acropolis of Athens and was expecting to find the former also founded on a high rocky outcrop (Wheeler 1962).

Sir Mortimer Wheeler was also struck by the potential of the Bala Hisar during his tenure as Director-General of the Archaeological Survey of India, suggesting that: 'No other site is so likely to yield a complete culture-sequence from the period of the Indus valley civilisation, through Vedic times, into the historic period' (Wheeler 1950: 51). Although this view was ambitious, he noted that the eastern foot of the fort was most suitable for excavation as the historic overburden had already been removed by erosion and farmers 'leaving the pre-mediaeval strata exposed to immediate attack'. True to his word, when he returned to Pakistan in 1958 he opened a series of major trenches at the eastern foot of the mound, including his enormous 23m deep step trench (Ch. I) down the side of the mound to natural soil (Plate 1.3). Working before the general use of radiocarbon dating, Wheeler regarded the presence of iron objects in the lowest levels of the trench as indicators of contact with the Achaemenid Empire to the west as he believed that both iron-working technology and urban forms had been transferred from Iran to the Indus region in the 6th century BC. His next chronological pegs were the attribution of the defensive ditch exposed in trench Ch. III to the siege and sack of the city by Alexander the Great in 326 BC, followed by the site's assimilation into the Mauryan Empire in the 3rd century BC. The output of his excavations, a comprehensive typological sequence, has become one of the most widely used references in the north-west of the subcontinent (Wheeler 1962). For example, when Italian archaeologists working in the valley of Swat to the north in the 1960s encountered cemeteries, which they termed 'Pre-Buddhist', they linked them to Wheeler's typology (Stacul 1966). Indeed, they used similarities between the ceramics recovered from these cemeteries and those in the lowest levels of Charsadda to suggest a relative chronology of the 6th century BC for their own material (Stacul 1966). Even when these cemeteries were re-christened the 'Gandharan Grave Culture' following Dani's excavations in Dir (Dani 1967) and when Charsadda was allocated to Swat Period V following Stacul excavations in the rock shelter of Ghaligai (Stacul 1967), Wheeler's chronology was still used as the anchor for the absolute dates (Dani 1967).

However, as early as 1977, there were concerns raised

that although Wheeler's relative framework was internally and externally consistent, its absolute chronology was too young and did not correspond with a limited number of earlier radiocarbon dates from the northern valleys also allocated to Swat Period V (Stacul & Tusa 1977: 177). These comments were again reiterated by Stacul, who focused on the artefacts in the lowest levels at the Bala Hisar and suggested that 'the date of the deepest archaeological layer is earlier than that previously assumed' (Stacul 1979: 342–343). These misgivings were further developed by Tusa, who prepared a comparative chronology for northern Pakistan and redated the earliest layers of trench Ch. I to c. 1200 BC (Tusa 1979: 680). This date was subsequently pushed back even further by Dittmann's study, which allocated the basal levels a date of c. 1400 BC and suggested that 'the sequence of the first millennium BC in northern Pakistan needs much more study' (Dittmann 1984: 191). Although querying the dates allocated to the appearance of certain ceramic types, such as the 'Tulip Bowl', Vogelsang broadly agreed with Dittmann's early chronology but also identified three successive ceramic flavours within the early sequence (1988; 1992). The first was a 'local' assemblage strongly associated with Swat Period V as identified by vessels with 'Rippled Rim' decoration and vessels of 'Red Burnished Ware'; the second was an 'Indic' assemblage of carinated bowls; and the third, was a 'western (Aegaeic)' flavour, as represented by the 'Tulip Bowl' (Vogelsang 1992: 246). It should be noted, however, that these successive analyses are by no means fully accepted by all scholars and there is still considerable confusion and disagreement about the date of particular diagnostic artefacts. For example, Wheeler attributed the 'Tulip Cup' to between the second and third centuries BC (Wheeler 1962: 40), Dittmann to a pre-Alexandrian date (Dittmann 1984: 172) and Vogelsang to a post-Achaemenid date (1988: 104), whilst one example was recovered from Period II (Painted Grey Ware level) of Lal's excavations at Hastinapura on the Ganges (Lal 1955: 49, no. XXXVIa), which is dated to around the first half of the first millennium BC (Erdosy 1995) (see Chapter 8).

As is clear from the above section, previous attempts to date the lower levels of the Bala Hisar of Charsadda have all been reliant on reanalyzing Wheeler's published data and linking his sequence to newly constructed regional frameworks and a limited number of radiocarbon dates from the northern valleys. In order to place this chronological debate on a surer footing, a collaborative team from the Department of Archaeology, University of Peshawar, and the Department of Archaeological Sciences, University of Bradford, formed the Charsadda (Pakistan) Project and returned to the Bala Hisar of Charsadda and conducted fresh fieldwork and excavations (Figure 1.1) (Plate 1.4). Our project aims were to study the nature of the origins and development of the early sequence of the site and were supported by the following objectives. Firstly, to provide a chronometrically-dated artefact and ceramic typology for the Bala Hisar's lowest levels; secondly, to provide a chronometrically-dated structural typology for the Bala Hisar's lowest levels; thirdly, to provide material correlates for the initial occupation of the mound, allowing the creation of a chronological model for the emergence of urban forms in this region of South Asia; and fourthly, to compare the development of the settlement at Charsadda with that of other sites within the region. The formal phase of primary data collection was completed between 1993 and 2000 with a total of six field seasons conducted at the Bala Hisar of Charsadda. These consisted of three excavation seasons, one surface survey season and two post-excavation study seasons. During each field season, we identified specific problems associated with the chronological and stratigraphic interpretations of the site and focused our field operations in order to solve them (Ali *et al* 1998). These seasons were followed by a study season in which each object was recorded and selected samples photographed and drawn.

The main outcome of the project, the present monograph, is divided into three main sections: the site, its artefacts, and the regional synthesis. The first section includes a discussion of the environmental setting of the Peshawar Plateau, the history of archaeological investigations, the non-intrusive surveys of the site, the excavations of its fortifications, the excavation of its habitation levels, and the dating of the site. The second section includes chapters discussing the 70,240 unglazed ceramics, the 73 metal objects and metal-working residues, the 175 glass objects, the 81 stone objects, the 275 terracotta objects, the 87 glazed ceramics, the 38 ivory, bone and shell objects, the archaeobotanical materials and the archaeozoological material. Part three includes discussions of the settlement and urbanization of the Vale of Peshawar and its northern valleys within a regional synthesis. Each artefactual chapter in section two follows a similar organization and contains an introduction to the material, followed by a complete catalogue of each artefactual group, recording special find number, context number, structural period and weight; dimensions are recorded if necessary. Key and representative examples are illustrated in order to provide explicit artefactual groupings. As in the case of the monographs on the excavations at Anuradhapura (Coningham 1999; 2006), the artefactual catalogues comprise the largest section and are purposely embedded within the text as they represent the key data sets and results from the excavations at the Bala Hisar and not an annex to our work. Where possible, analogies and comparisons with other relevant sites and artefacts have been made, and much of this work has relied heavily on the expertise of the team of scholars who contributed formally to this volume; in addition, a number of other scholars offered additional assistance and their comments are gratefully acknowledged. These data sets, when combined with our series of radiocarbon dates, strongly support earlier suggestions that the site was founded c. 1400 BC (Dittmann 1984), some 800 years earlier than suggested by Sir Mortimer Wheeler. Many of the artifacts excavated from the site support this chronology and show striking affinities with those from

sites in the northern valleys of Dir, Swat and Chitral. This evidence confirms that a broad regional character had already emerged in Gandhara before Achaemenid contact, linking the Bala Hisar of Charsadda with the settlements of the northern valleys as well as with a wider distribution of larger settlements at Hathial, Taxila to the south-east and Akra to the south-west. It is equally clear, however, that strong cultural links had also been established with the regions to the east of the Punjab by the beginning of the first millennium BC, thus questioning attempts to sub-divide south Asia's second urbanization into separate Gangetic and north-western spheres of influence (Allchin 1989). Indeed, our evidence suggests that they were already intimately linked, well before the Achaemenid assimilation of the northwest.

It is hoped that publication of this volume will allow a presentation of our data and its interpretation; however, we should reiterate Barry Cunliffe's words of warning that:

> no excavation report, however detailed, can hope to be more than an interim summary of a site. To suggest more would be naive or arrogant. A data-set... will continue to be reworked by students for the foreseeable future asking new and increasingly sophisticated questions. These reports merely advertise what is available and offer some general approximations to the truth which may help those interested in these matters to design new and more penetrating analyses (Cunliffe 1984, viii).

Finally, it should be noted that diacritical marks have been dispensed with following the convention used by the Cambridge Encyclopaedia of India, Pakistan, Bangladesh and Sri Lanka (Robinson 1989).

Plate 1.1: General view of the Bala Hisar of Charsadda from the west

Plate 1.2: General view of the Bala Hisar of Charsadda from the eastern mounds

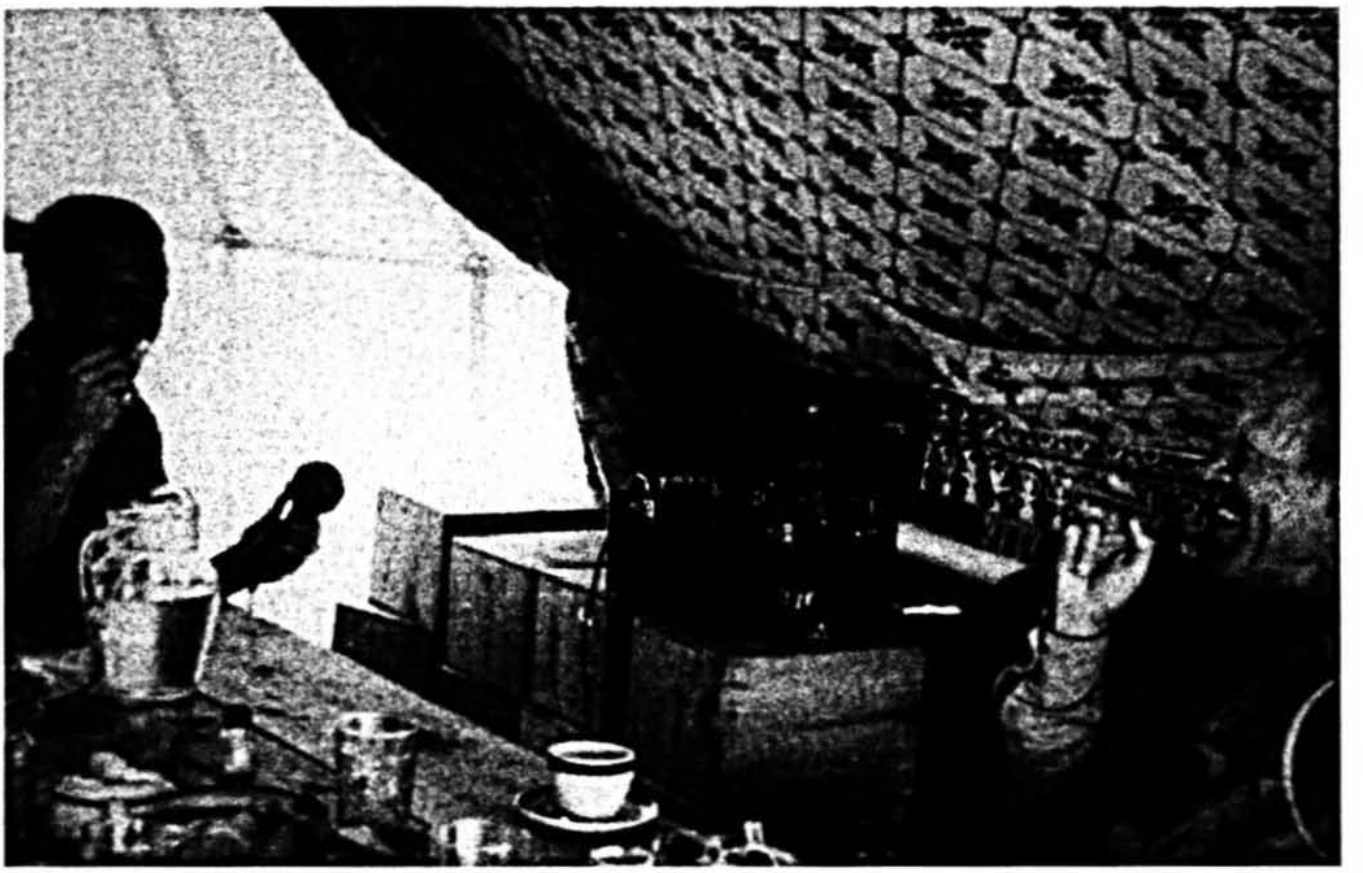


Plate 1.3: Sir Mortimer Wheeler and Professor Roy Hodson recording an interview for the BBC during the 1958 excavations at Charsadda (courtesy Sylvia Matheson)

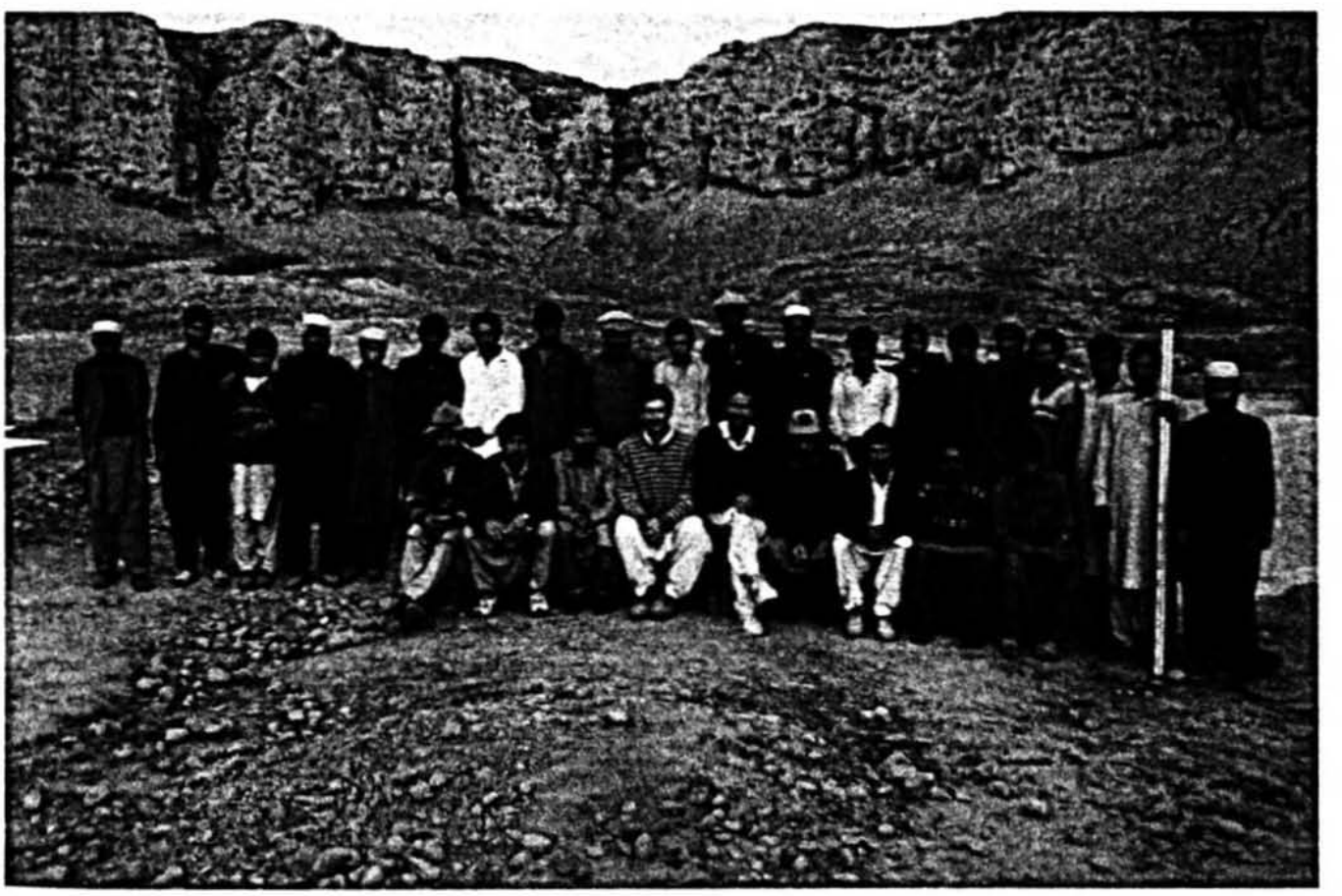


Plate 1.4: View of the team of field archaeologists from the Universities of Peshawar, Cambridge and Bradford at the Bala Hisar of Charsadda

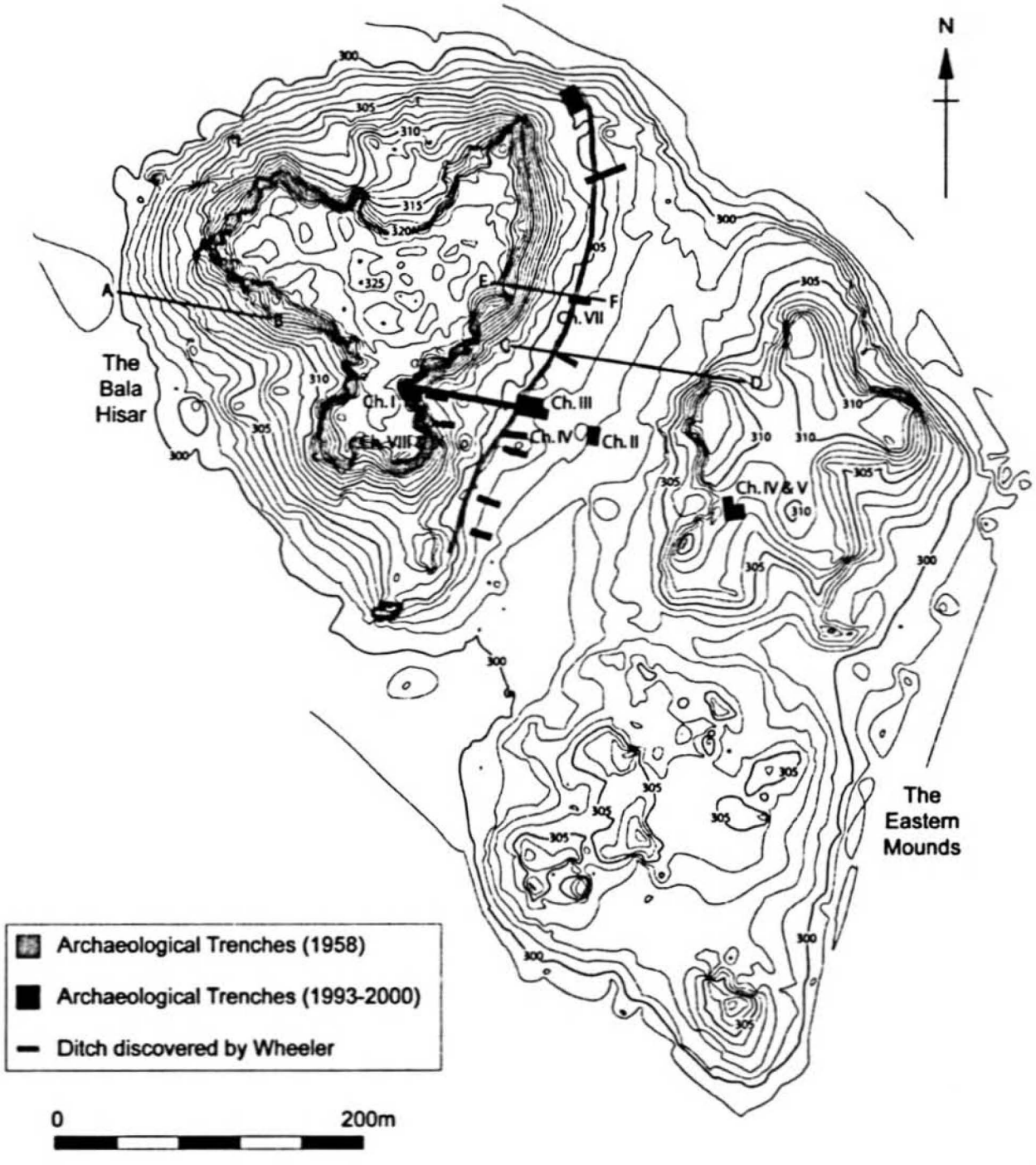
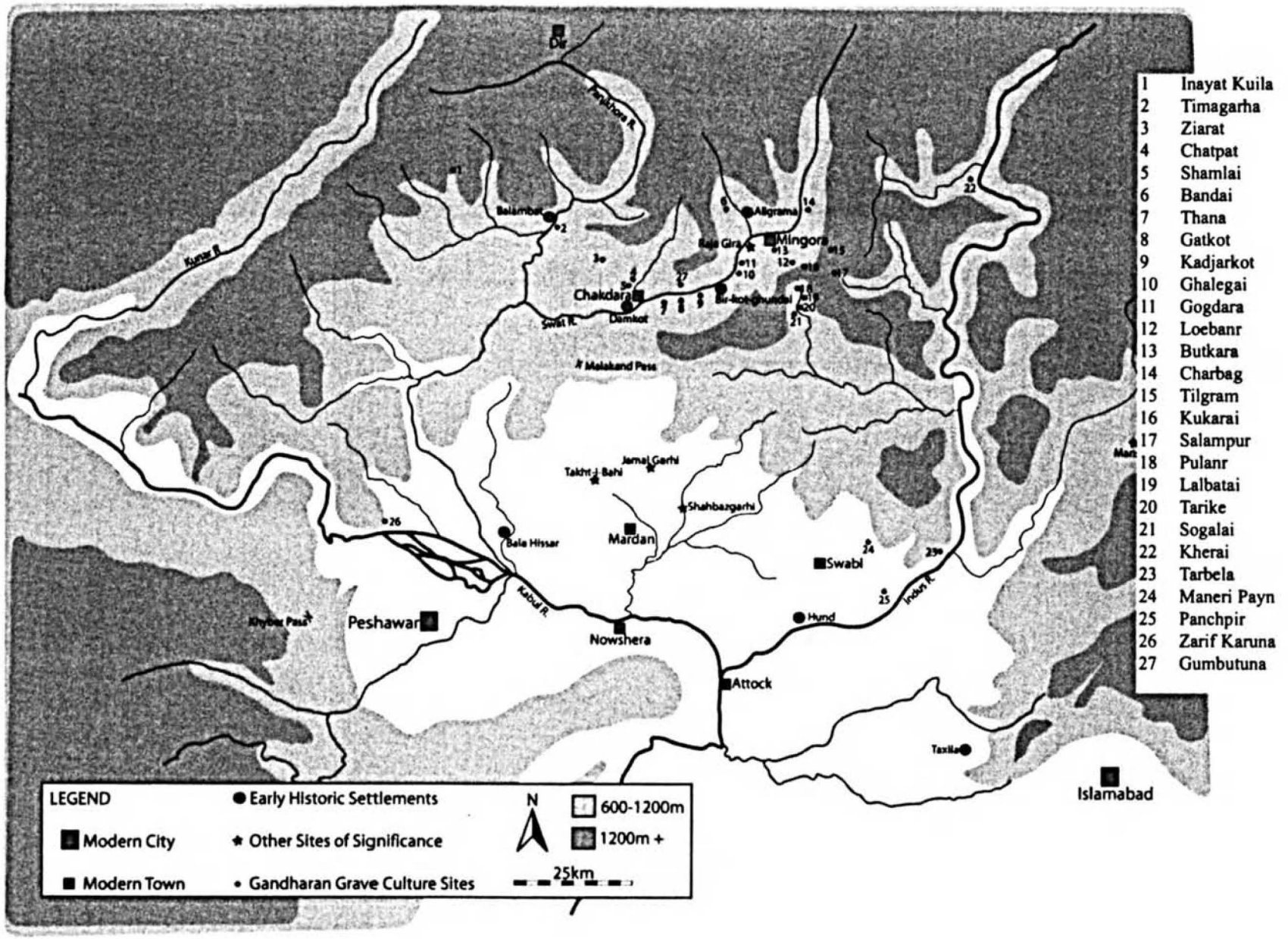
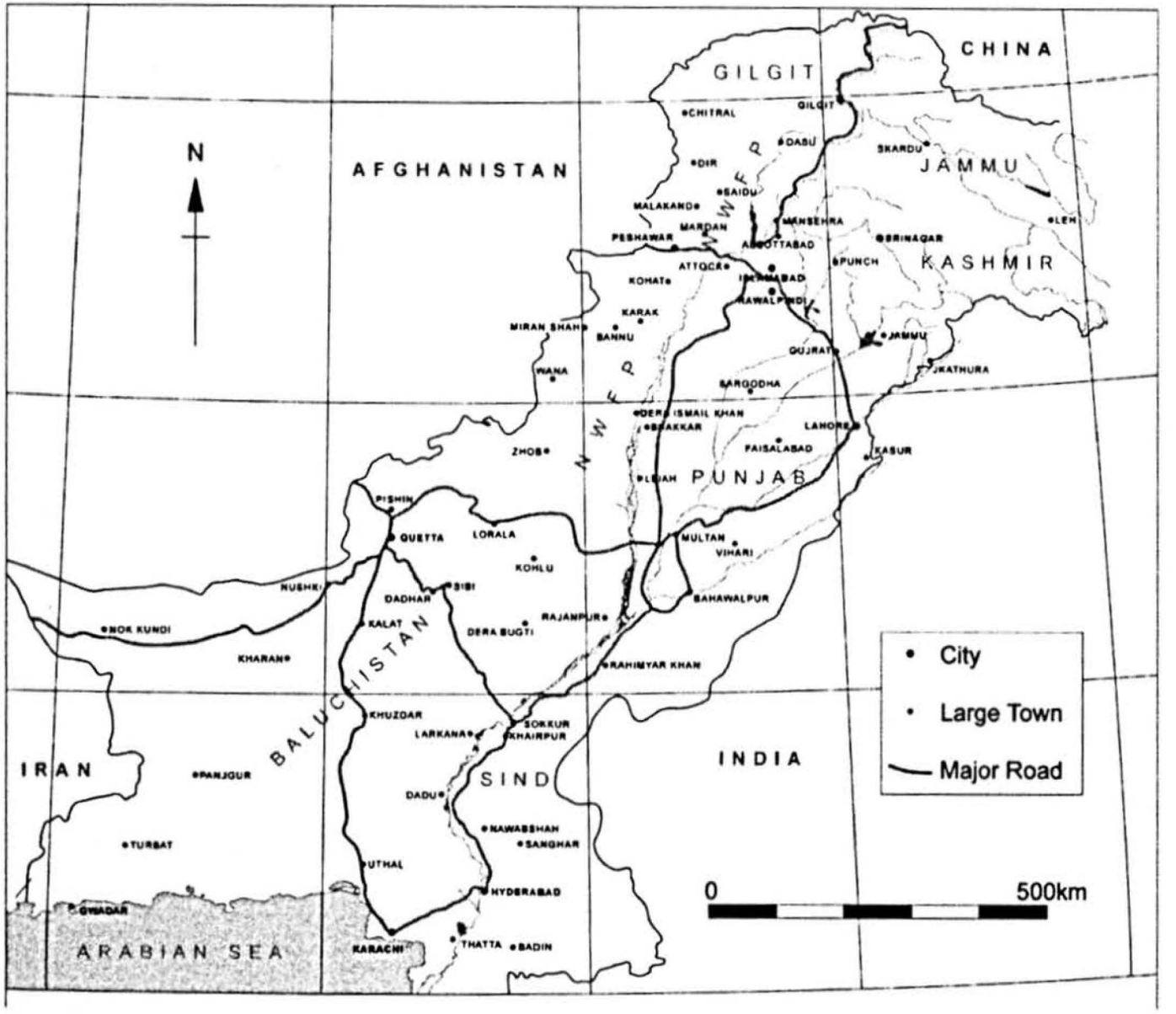


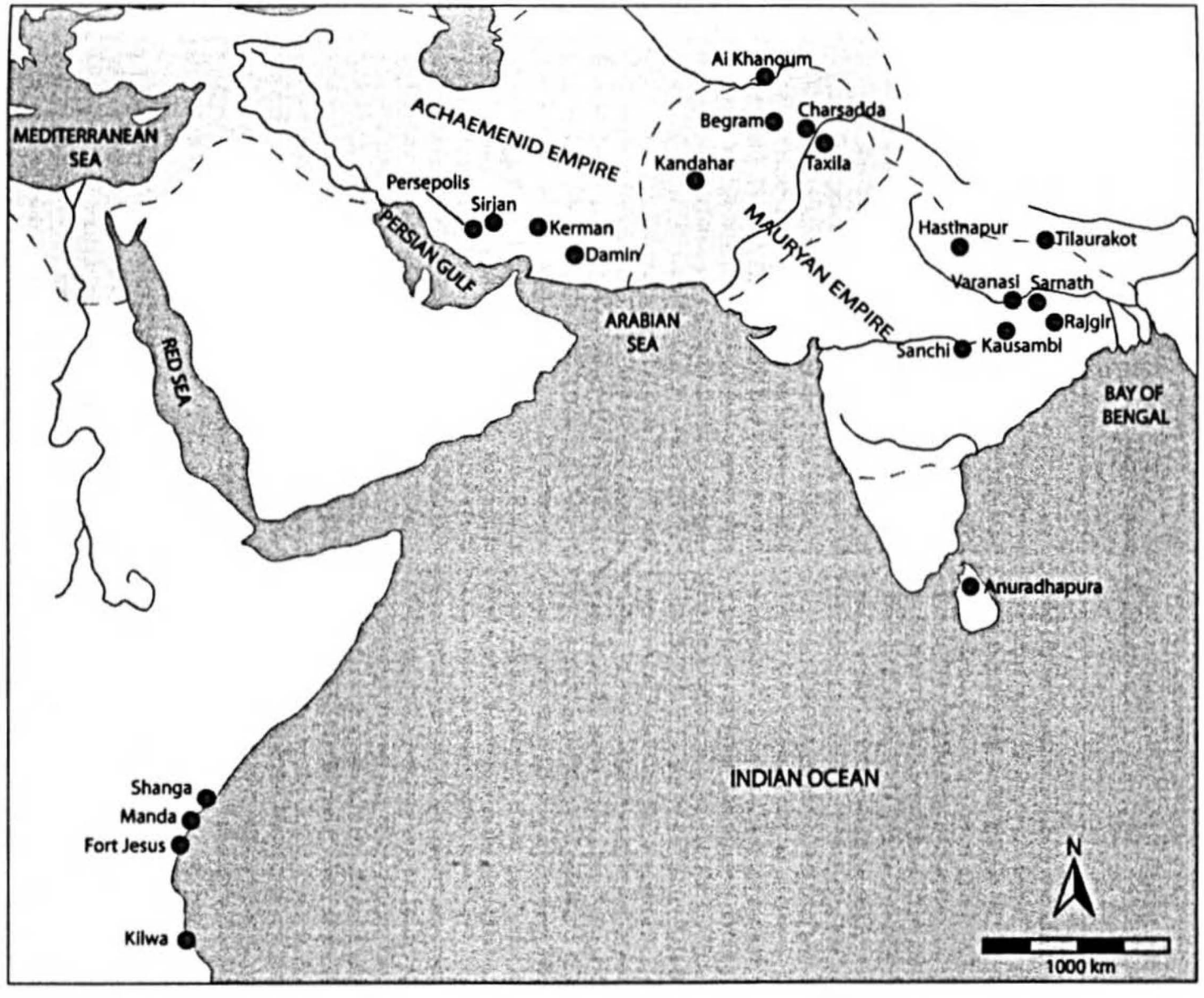
Figure 1.1: Plan of the location of trenches Ch. III, Ch. VI, Ch. VII and Ch. VIII/IX



Map 1: Map showing the Vale of Peshawar and adjacent areas



Map 2: Map showing regional archaeological sites mentioned in the text



Map 3: Map showing the extent of the Persian and Mauryan Empires

CHAPTER 2

THE ENVIRONMENTAL SETTING

Ruth Young & Ihsan Ali

2.1 INTRODUCTION

It is important to place any archaeological site within its wider landscape setting, as the presence or absence of physical features and resources are likely to have had a great influence on site development and function. The fertility of soils, the effect of topography, and the impact of hydrology are among the issues that need to be addressed as part of this understanding. The modern town of Charsadda lies approximately 32km to the north-east of the city of Peshawar, and the site of the Bala Hisar of Charsadda is located at the edge of the modern town itself (Wheeler 1962: 1) (Map 1). Charsadda and Peshawar are both located within the elliptical basin known as the Vale of Peshawar, which forms one of the distinctive geographical units of the North West Frontier Province (NWFP) (Dichter 1967: 91). Lying between latitudes 33° 40' and 34° 30' North and longitudes 71° 15' and 72° 50' East, the Vale of Peshawar is bounded on three sides by hill and mountain ranges (Plate 2.1). Only to the east is the Vale of Peshawar open, and here the province of Punjab meets the North West Frontier where the Kabul and Indus Rivers join near Attock, in an expanse of relatively flat ground that allowed easy access between the two cities of Taxila and Charsadda in the Early Historic period. The Vale itself comprises an area of approximately 6,215 square kilometres, and is divided into the five administrative units of Peshawar, Charsadda, Mardan, Nowshera and Swabi. It can also be divided into three distinct physiographic zones: the river valleys, piedmont, and central lowlands. Charsadda is located within the river valley zone, and the aim of this chapter is to describe the physical setting of the site, considering its geological, soil, climate, irrigation, vegetation and animal population.

2.2 PHYSIOGRAPHY AND HYDROLOGY

In terms of physiography, the mountain and hill ranges of NWFP play a major role in determining climate and soil, as well as settlement and population distribution. The Vale of Peshawar, or Peshawar Basin as it sometimes known, is an area of undulating plain within the hilly and mountainous terrain to the north (Plate 2.2). Although not directly adjacent to the mountains characterising the northern districts of Chitral, northern Swat and Dir, the piedmont area which surrounds the Vale itself forms a distinct boundary. The Malakand Ridge and Buner Hills to the north of the Vale reach a height of 1500–1800m, and to the west lie the Mohmand Hills and Khyber hills, with the Khattack Hills and Cherat Range to the south and south-east. The important passes that link the north-west of the Vale of Peshawar with surrounding areas include the Khyber Pass in the west to modern Afghanistan (Plate 2.3), the Malakand Pass in the north leading to Chakdara, Dir and Swat and on to Chitral via the Lowari Pass (Plate 2.4) and the Kohat Pass in the south, leading to the Kohat Basin). As Kureshy notes, many of these passes are easily negotiated, which has meant that they have been used for trade, movement and invasion throughout history and prehistory (Kureshy 1977: 150). Dichter, however, makes an interesting point about symbolic division of space and barriers from a geographical standpoint and suggests that it is the Indus, particularly where it joins the Kabul River as it reaches Attock, which is the main barrier between central and south Asia, rather than the mountains to the north (Dichter 1967: 104). He bases this separation in part on the land to the east of the Indus at this point being arid and dry, while to the west, in the Vale of Peshawar it is lush and fertile. This interpretation clearly differs from those scholars who have seen the mountains and their passes around the north and west of South Asia as the major barriers and boundary markers here (Stacul 1996; Stein 1929; Tusa 1979).

Surface water is of great importance throughout Pakistan, and the country can be divided into three general drainage basins: the Indus Basin; The Makran Coast Catchment; and the Kharan Desert Catchment (Bender 1995b: 291). All the major rivers in the northern part of NWFP belong to the Kabul River system which itself forms part of the Indus Basin system, and the rivers of the Vale of Peshawar, both large and small, are an important part of the physiology of the region (Dichter 1967: 7). The rivers of this northern area all have their source in the Hindu Kush range (Dichter 1967), and all except the very smallest streams and tributaries are permanent water courses, although the seasonal effects of snow melt can alter the flow dramatically, with snow melt noticeable from April through October (Bender 1995b: 292). The Chitral, Panjkora and Swat rivers are all important tributaries of the Kabul, and the Kabul itself joins the Indus near Attock, which forms a natural division between the Vale of Peshawar and the Potwar Plateau of Punjab to the east. The role of rivers in the development and character of the Vale of Peshawar is clearly of major significance – not only do they mark barriers as Dichter suggests (1967), but they are also responsible for the alluvium covering the Vale and are a prime source of water for agricultural irri-

gation. Rivers are equally important in Swat and Dir, as well as the Vale of Peshawar itself. Within these valleys to the north, the principal rivers (Swat River in Swat, Plate 2.5; Panjkora River in Dir and Chitral River in Chitral, Plate 2.6) provide an important source of irrigation, particularly in the lower reaches of each valley where there is a wide alluvial flood plain, and the majority of agriculture and population is located.

While the Vale of Peshawar in modern times is considered a very fertile and agriculturally productive area, this is largely due to both irrigation and fertilisation and we do not yet know whether irrigation was significant in antiquity or whether it played a significant role in the development of settled occupation in this region. For example, Stein noted evidence for a reservoir and irrigation works near the Buddhist site of Tokar-dara in Swat (1929: 13–14), but no systematic archaeological survey of irrigation has been carried out in NWFP. Much of the Vale's recent fertility is attributed to the completion of the Swat River canal in 1885, intended to provide irrigation for the arid Yusufzai Plain (Imperial Gazetteer of India 1904: 44, 120), and the later Malakand Tunnel, which was designed to supply the Peshawar district with extra water through branch canals. The Kabul River canal, completed in 1893, was thought to be on the course 'of an old Mughal canal' (Punjab Government 1897–98: 121), and it also brought water to Peshawar District.

Charsadda itself is located within the doab region of the Kabul and Swat rivers, which is a low-lying alluvial plain, and part of the active flood plain of the two rivers (Dichter 1967: 93) (Plates 2.7 & 2.8). As noted in Chapter 1, the Bala Hisar of Charsadda is located close to the confluence of the Swat and Kabul rivers and separated from the mound of Shaikhan Dheri to the north-east by the Sambor. An analysis of historical writings and geographic descriptions by the Archaeological Survey of India in 1902–03 (Marshall 1904) provides a strong argument for extensive changes in the course of various rivers and streams within the Vale of Peshawar, and particularly in relation to the Bala Hisar and other archaeological sites. It is suggested that the confluence of the Kabul and Swat rivers has changed over time, and that the Bala Hisar, or Pushkalavati, would have been located closer to this meeting point than it is today (ibid: 145). River movement is also attested by the observation that in 1903 the Swat had cut between the series of archaeological mounds known as Shahr-i-Napursan, thus exposing artefacts, particularly pottery and stratigraphy in the river banks (ibid: 145). When Wheeler excavated at Charsadda in 1958, he suggested that the small Sambor River had originally flowed between the Bala Hisar itself and its eastern mounds on account of the grey alluvial sand found in trench Ch. II, but that as the settlement expanded the course became choked and shifted (Wheeler 1962: 1). We were able to test this hypothesis by augering a series of profiles across the Bala Hisar and found that the silt actually underlies the entire mound and indicates that the entire plain around it is the result of alluvial deposition but that the settlement of the Bala Hisar was actually founded on a low cap or mound of clay (Figure 5.5). This expands our understanding of riverine activity within the region and suggests that the area between the two mounds and the surrounding plain was subject to regular flooding. This new interpretation of the sediments demonstrates that the development of Charsadda is closely linked to the activity of the river and its flood plain. The presence of river cobbles in the construction of various buildings further supports this idea that not only were there potentially a number of rivers close to the Bala Hisar in the Early Historic period, but that occupants were making use of a range of riverine resources. These cobbles are discussed in more detail in Section 6.3.

2.3 IRRIGATION IN THE VALE OF PESHAWAR

A number of traditional methods of irrigation used within the Vale of Peshawar are recorded by Ali (2003:18–19). While dams or bunds built across rivers to divert water into irrigation channels remain an important method today, well irrigation, including the use of the Persian wheel, manipulating natural springs and using underground shafts (karez), are all known in this region today. Certainly there are references to the fertility and lushness of the Vale of Peshawar in Early Historical accounts, and these give clues to the importance and presence of irrigation in this region. A number of Chinese pilgrims passed through this region during the first millennium AD, and have left accounts of the countryside (Imperial Gazetteer of India 1904: 152–153; Stein 1921). For example, the Chinese pilgrim Hiuan-tsang (Xuanzang) travelled in here in the 7th century AD, and has left a description of the area around Peshawar: 'The country had luxuriant crops of cereals and a profusion of fruits and flowers... the climate was warm' (Watters: 1904: 240). Foucher (1915: 3) compares Hiuan-tsang's (Xuanzang) description of the Vale of Peshawar with his own observations and concludes that the land is producing good cereal crops, particularly 'where the canals of the Indian period [i.e., pre-Islamic]...have been reopened by the English engineers. It has even been possible recently to recommence the cultivation of the sugar-cane which Hiuan-tsang (Xuanzang) mentions...'. The widespread cultivation of sugar cane as a crop today in the Vale of Peshawar is discussed further below in Section 2.7, but this record indicates that the growing of intensive crops, with some form of irrigation, was widespread here during the middle of the first millennium AD.

Government Records from the late 19th and early 20th centuries also provide interesting descriptions of the landscape and irrigation, which should be considered when trying to understand changes in this region, as well as different approaches to the manipulation of water resources. The Imperial Gazetteer of India (1904: 44, 120), for example, outlines the effect of the original Swat River canal, which was completed in 1885 and provided irrigation for an extensive part of the Yusafzai plain to the north-east of the Kabul and Swat rivers, and the 1897–98 Gazetteer notes the importance of canals in maintaining the population of this region (Punjab Government 1897–98: 15). The Kabul river canal, completed in 1893 with a similar effect on Peshawar and Nuashera Districts, is apparently a reworking of a canal originally built during the Mughal period (Punjab Government 1897–98: 121). It is thus clear that while the Vale of Peshawar has great potential in terms of

fertility and agricultural production, this can only be achieved with water management of some form. McMahon and Ramsay (1901: 12–13), Political Agents in this region at the end of the 19th century, described the land from the Malakand Pass down into the Vale of Peshawar as being dry with irregular rainfall, and thus dependent on the digging of wells to provide water to ensure good crops. While Ali's survey work (2003) suggests that trade routes were the main factor influencing settlement location with the Vale, we should not forget that without sustained archaeological exploration of a range of sites, we cannot know whether they were exploiting some other form of irrigation than those associated with the rivers.

2.4 GEOLOGY & MINERALS

The position of NWFP in relation to the Himalayas and Hindu Kush has resulted in the region's distinctive mountain and hill chains, interspersed with low lying basins (Kureshy 1977; Dichter 1967). The Himalayas are thought to be relatively young in geological terms, dating from the Tertiary (although Pre-Cambrian rock was upthrust during their creation), meaning this is still a relatively unstable area (Johnson 1981). While the northern mountain chains were growing, they were also subject to extensive erosion through weather and river action, and these rivers in turn carried vast amounts of sediments down to lower lying levels, and this soil creation in the region is discussed further below (Section 2.5). The northern section of NWFP is formed from old metamorphic and igneous rock, while areas to the south have softer sedimentary rock as their base, although geologists are still unable to agree whether the Peshawar Basin was formed by faulting or downwarping. The Peshawar Basin itself is formed of Quaternary rock, being mostly unfolded and unconsolidated clastic sediments, surrounded by a mix of Tertiary and Proterozoic rock, plus some igneous metamorphic and gneiss types (Raza and Bender 1995), and this low-lying basin has been covered in alluvium. The major rock types around the basin are granites and schists (Shams 1995a: 41). The Quaternary basin has been filled with silt, sand and gravel, with some deposits of clay (Bender 1995b: 316). This is important in terms of human settlement because the combination of granites and schists forming hill and piedmont areas surrounding a large level basin filled and re-filled with alluvial material has resulted in areas of great contrast, which have been exploited by humans in different, but almost certainly connected, ways.

Many of the minerals and rocks found in Pakistan have concentrations in or near the Vale of Peshawar: iron ore is found in southern Chitral and to the east in Haripur; chromite within Charsadda District; gypsum from Kohat; limestone from Nowshera and Kohat; marble from the Khyber Agency (where the white marble is said to compare favourably with Carerra marble from Italy), Mardan and Nowshera; kaolin (China clay) from Hazara district and near Mingora in Swat; antimony in southern Chitral; bauxite in Hazara; manganese in Kohat (Kureshy 1977: 53–56); coal from Cherat (Kazmi 1995a: 207); gold, silver and lead from Hal in Mardan District (Shams 1995b: 235); and steatite from deposits 18 and 30km east of Peshawar (Bender 1995a: 273). Gemstones, such as emeralds and rubies, are known from Dir and Swat; along with gypsum, copper, tin, molybdenum, cobalt, bismuth, lead, zinc, marble, pyrite, mica, platinum, gold, and other metallic and non-metallic raw materials (Kazmi 1995b: 281–290). Chitral and northern Dir are particularly rich in silver, gold, copper, lead, tin, and antimony, all of which are well known in antiquity (Shams 1995b: 242). Such a range of metallic and non-metallic minerals means that communities living in and around Charsadda would have had ready access to many useful and desirable raw materials; if not actually obtained directly, then certainly through mechanisms of trade and exchange. In terms of raw building materials, Bender (1995a: 275) notes that a whole range of rocks well suited to building, such as slates, limestones, granites and quartzites, are found in abundance throughout the NWFP, and that clays suitable in modern terms for the manufacture of high quality ceramics are also available (ibid.: 276). Excavations in Swat have revealed extensive use of local stone for construction at sites such as Loebanr III, Bir-kot-ghundai, Aligrama and Kalako-deray (Stacul 1987), as well as its use at the Bala Hisar of Charsadda (Wheeler 1962) and Shaikhan Dheri (Dani 1966). In terms of future research, chemical analysis of ceramics from Charsadda and the northern valleys would reveal whether local clays were being utilised in pottery manufacture, or whether clay was being brought in from other areas in the region, or even if different clay sources were being used for different types of vessels. For instance, understanding whether the presence of kaolin in both Hazara and Swat influenced local pottery production in these areas, and in turn whether ceramics were then traded locally, and whether particular vessel types may have been produced from certain clay resources would be very interesting indeed, and add a great deal to our interpretations of contact between Charsadda and sites in Swat and Dir.

2.5 CLIMATE

The presence of the Hindu Kush and Himalaya mountain ranges have not only had great impact on the geology of the region, they are also of great importance in their effect on climate as 'these ranges effectively bar the movement of airstreams at surface level between south and 'inner' Asia and vice versa' (Johnson 1981: 29). This, of course, has a major effect on cloud cover and rainfall in regional terms, and this effect is reflected in miniature within the Vale itself. The climate of the Vale of Peshawar is greatly determined by its relatively low-lying position within the highlands and hills that surround it on three sides. In particular, this means that there is a pronounced difference in rainfall between the western and eastern areas of the basin, with the western areas, such as Charsadda receiving considerably less than districts to the east (Dichter 1967: 104). In turn, this has major implications for agriculture, and the role of irrigation in the development of agriculture, an issue discussed further in Chapter 15. In general, the Vale of Peshawar has no distinct season of rainfall maximum, and is classified as semi-arid. It is a region of temperature extremes as a result of its inland location, especially when compared to coastal cities such as Mumbai, Colombo and Chittagong (Johnson 1981: 21). The mean annual rainfall

recorded at Peshawar is 500mm, which can vary between 625mm (1976) and 323mm (1982) (Raza & Bender 1995: 8). This contrasts greatly with two thirds of Pakistan, which receives less than 250mm rainfall annually (Bender 1995b: 292). The Vale of Peshawar has four main climatic periods: the cold period extends from December to March, with some frost and the average daytime temperature of 15oC; the monsoon period spans July to September, with temperatures of 40oC and high humidity levels. There are two transition periods (April to June and September to November) when temperatures rise and fall respectively (Dichter 1967: 104–106; Imperial Gazetteer of India 1904: 83).

2.6 SOILS

The dominant alluvial soils in the Vale of Peshawar are the result of the action and flooding of the Kabul, Swat and other major rivers, along with their many tributaries. What Kureshy (1977: 22) describes as 'old alluvium' or Bangar soils, which are surrounded by areas of slope soils in keeping with the topography of the region, are those found in the Vale of Peshawar, rather than new alluvium. Bangar soils tend to be deep, and this is evident in Charsadda district, shown by auguring by the Bradford-Peshawar project as discussed in Chapter 5, and by the deep cuts required for irrigation channels and their maintenance. Bender (1995b: 316) suggests that the fill of the Peshawar Quaternary basin is up to 300m deep in places, which has been confirmed by the sinking of boreholes that have reached artesian groundwater at this depth. Bangar soils tend to be low in organic material and in places have been exposed to the leaching effect of rainfall, which means that untended they are not very fertile at all, but with irrigation and fertilization they can become very productive (Kureshy 1977: 21). When poorly drained and waterlogged, these soils have the potential to become very saline; this salinity has reached an extreme level at the site of Harappa, and indeed the whole of the Indus Basin is dominated by Bangar soils (ibid.: 22–23; Johnson 1981). Waterlogging of irrigated farmland has been reported in the village of Gara Tajik, north of Peshawar city, as a result of the Warsak Dam (Shaukat & Begum 1992: 2), and all these problems highlight the fragility of what appears to be a lush and fertile region, described by Wheeler as 'well-watered farmlands' within the 'wide and teeming plain of Gandhara' (1962: 1, 3).

2.7 MODERN CROPS AND LAND COVER

While the Vale of Peshawar receives more rainfall than many other areas of Pakistan, it is still characterised as dry and sub-tropical, and this is reflected in the natural tree and scrub cover here. Acacia (Acacia spp. L.) and wild olives (Olea spp. L.) are consistent with arid or semi-arid conditions (Edlin et al 1978: 202), while the range of other trees that have been noted in the past are the result of the widespread irrigation since the 19th century and (probably) more limited irrigation in the Mughal Period. The Imperial Gazetteer of India (1904: 145) notes that while acacia and olive are common in dry areas, where there is irrigation, mulberry (Morus spp. L.), shisham (Dalbergia sissoo L.) and tamarisk (Tamarix spp. L.) are also commonly found. Drawing on the account of the 7th century AD religious pilgrim Hiuan-tsang (Xuanzang), Foucher noted that water was described as abundant during this earlier period, but that a general 'drying up' of water sources such as springs and streams was evident in the late 19th and early 20th centuries, and that there were verbal reports of this 'general desiccation' having had an impact on the landscape for several hundred years previously (Foucher 1915, 3–4). Foucher also suggested that part of this increasing aridity may have been due to a tendency for later incoming populations to use wood as a source of fuel resulting in deforestation, whereas previous communities had used dung as their primary fuel source (ibid: 4).

Although in 1903–04 only one third of the area making up the Vale of Peshawar was under cultivation, two thirds of its population was recorded as involved in agricultural production (Imperial Gazetteer of India 1904: 85, 34). This suggests that while agricultural activity was of a relatively low intensity, it was of considerable importance to the majority of the population. Interestingly, town and country populations at this time had quite different diets. Urban communities are recorded as eating bread made from wheat as their staple, along with some meat, whilst rural groups were reported to have a much more varied diet, which was seasonal in nature. Therefore, in summer wheat and barley were eaten along with vegetables, wild fruit and milk products, while in winter, it appears that maize and millets (both harvested in autumn) formed their dietary staples (Punjab Government 1897–98: 101). This trend of more limited diets in urban areas compared with much greater variety in rural areas is returned to again in Chapter 15, when the archaeological plant remains from the Bala Hisar are discussed, and compared with those from sites in Swat.

Modern agriculture in Charsadda District is very intensive, with around 95% of all farms cultivating their total land area, and of this cultivated land, 98% is irrigated (Govt. of Pakistan 1994: 159). This clearly shows the need for this land to be manipulated to sustain agricultural production and concentrated populations, and does raise questions about its fertility in the Early Historic period. Was the land subject to irrigation then in order to produce the food necessary to establish and support a growing urban population, or was it infertile due to the quality of the soil and lack of irrigation? As noted above in Section 2.3, Hiuan-tsang's (Xuanzang) travel account of Gandhara in the 7th century AD includes mention of irrigated crops, indicating that irrigation was an important aspect of agriculture at least in the early to middle centuries of the first millennium AD (Foucher 1915: 3).

When we contrast the irrigation figures for Charsadda with those from Swat and Dir, we see that in Swat only 50% of cultivated land is irrigated, while in Dir, the figure is 80% (ibid: 164–165). Clearly this difference in irrigation is likely to be a response to the different surface water and rainfall quantities in each region. Swat and Dir both have higher rainfall levels than Charsadda (Dichter 1967: 12, 32), and the presence of the Swat and Panjkora Rivers and their tributaries provide not only a year round water supply, but also a wide flat area of river plain in their lower reaches, well suited to agriculture, which is far more accessible in Swat than Dir. Although the use of fertilizer and manure

is high in all these areas (Govt of Pakistan 1994: 530), this is likely to be because the soil is old alluvium and thus largely non-organic, therefore water becomes the crucial factor in developing and maintaining fertility. Modern irrigation without a doubt plays a major role in the fertility of the Vale of Peshawar, and its ability to produce two crops per year. Swat and Dir have greater natural fertility due to rainfall as well as river irrigation, and are thus able to produce quantities of food, and from this it may be suggested that these valleys could have been a source of food crops in antiquity for the expanding sedentary population in the Vale of Peshawar.

There are two main cropping seasons in Charsadda District: summer or *kharif* crops are sown between May and August, and harvested between September and December; winter or *rabi* crops are sown between October and January, and harvested during April and May (Imperial Gazetteer of India 1904: 38). Extensive ethnographic interviews and observations in the vicinity of the Bala Hisar itself has enabled us to gain further understanding of modern crops and farming practices here, which is useful for interpreting our archaeological plant remains and associated agricultural practices (Young 2003: 70). The majority of farmers working the land do not own it, but have an agreement with the owner, whereby the farmer retains 50% of the crop, and the owner takes 50% of the crop (or profit) and this arrangement doubtless has a great effect on what is grown on this land. In particular, the importance of cash crops such as sugar cane has increased progressively since the end of the 19th century (Dichter 1967; Imperial Gazetteer of India 1904). While sugar cane is the main cash crop, farmers around Charsadda also grow wheat for their own domestic requirements, which is ground in the nearby flour mills, one of which is located at the junction of the main road from Peshawar and the small unsealed road leading to the Bala Hisar. The only other crop noted as grown regularly at Charsadda was a fodder crop (also a cash crop), of a clover type (*Trifolium* spp. L.), which was described as very easy and quick to grow, able to be harvested twice a year, and in demand in both Charsadda town and Peshawar. Mian noted in his study of the cost of sugarcane and gur, the locally produced raw sugar from cane juice, that not only is the cost of fodder for bullocks the highest single item when analysing the costs of sugar cane production (Mian 1955: 5), but also that the cost of keeping bullocks is affected by the nearness to a city: the closer farmers are, the higher the upkeep costs (ibid.: 26). Rice was not reported as a crop grown around Charsadda, despite the extensive modern irrigation, but it is bought in from Swat and Dir and a similar situation was also reported during the late 19th and early 20th centuries (Punjab Government 1897–98: 213; Stein 1929: 51–52). While fruit trees are cultivated in this area, the farmers around Charsadda did not mention them as a cash crop of any significance. In contrast to this relatively narrow range of crops grown, a far wider range was noted among farmers in the valleys of Swat and Dir. Interviews with a range of sedentary and transhumant farmers recorded wheat, maize, vegetables, fruit crops (both fresh and dried), peas, and rice among the crops regularly grown in these northern valleys. Interestingly, only year–round sedentary farmers reported growing rice, which may be due to the more intensive requirements of paddy rice as a crop (Young 2003: 66–69).

2.8 MODERN DOMESTIC AND WILD ANIMALS

The intensive nature of modern cultivation in the Vale of Peshawar means that there are few large wild mammals left here today, with the exception of the wild boar (Sus scrofa L.) (Roberts 1997: 235). Wild pigs are noted pests of agricultural land, and are able not only to feed on the sugar cane but also use it as effective cover. Porcupines (Hystrix indica L.) are also known pests of cultivation in this region (ibid.). Of the domesticated animals kept by the local farmers around Charsadda, 75% are buffalo and cattle (Govt. of Pakistan 1994: 771), with cattle here including both zebu or humped cattle (Bos indicus L.) and non-humped cattle (Bos taurus L.). Buffalo and cattle are kept for traction, transport and the provision of dairy products such as milk, ghee, butter, cheese and yoghurt (Young 2003: 70). Both buffalo and cattle require better quality fodder than sheep or goat, and the quality of fodder also affects the taste and amount of milk produced, therefore most farmers found it necessary to buy in fodder as well as allowing the animals to graze. The Charsadda farmers rarely, if ever, kept sheep or goats, saying they had no practical need for these animals, and if their meat was needed it would be bought from the market. Chickens were kept, and it was these that provided a regular accessible source of meat (ibid.). This profile of animal keeping is in direct contrast to farmers (whether sedentary or transhumant) from Swat and Dir, where sheep and goats are the most important animals, but cattle (and only recently buffalo) are also significant (ibid.: 65-69). The greater range of both plant foods and animals found in the northern valleys is echoed in the archaeological findings discussed in Chapters 15 and 16.

2.9 CONCLUSION

This summary of the major physical features of the Vale of Peshawar shows how important such features as hills and mountains can be, affecting hydrology, soils, climate and access. In turn, these are all significant factors in past settlement and development of an area and may well be crucial in the occupation history not only of Charsadda and the wider area of the Vale of Peshawar, but also those areas to the north, such as the valleys of Swat and Dir. The Vale of Peshawar is today a fertile area sustaining intensive agriculture, but this has only been possible through fertilisation and more crucially, irrigation. There are records of Mughal period irrigation schemes, and irrigation has been of huge importance in the development of this region from the 19th century onwards, but we do not know the role of irrigation in prehistory and the Early Historic period here. We do know that Swat and Dir receive greater rainfall than the Vale of Peshawar, and are therefore areas with greater natural potential for crop production. When this is taken alongside the archaeobotanical material discussed in Chapter 15 and the other artefactual material that strongly suggests contact between these two areas, considering them as part of a dynamic system rather than separated due to physiographic factors, providing an influential backdrop when we present and discuss new models of development and growth for the Bala Hisar of Charsadda.

Plate 2.1: Satellite image of the Vale of Peshawar

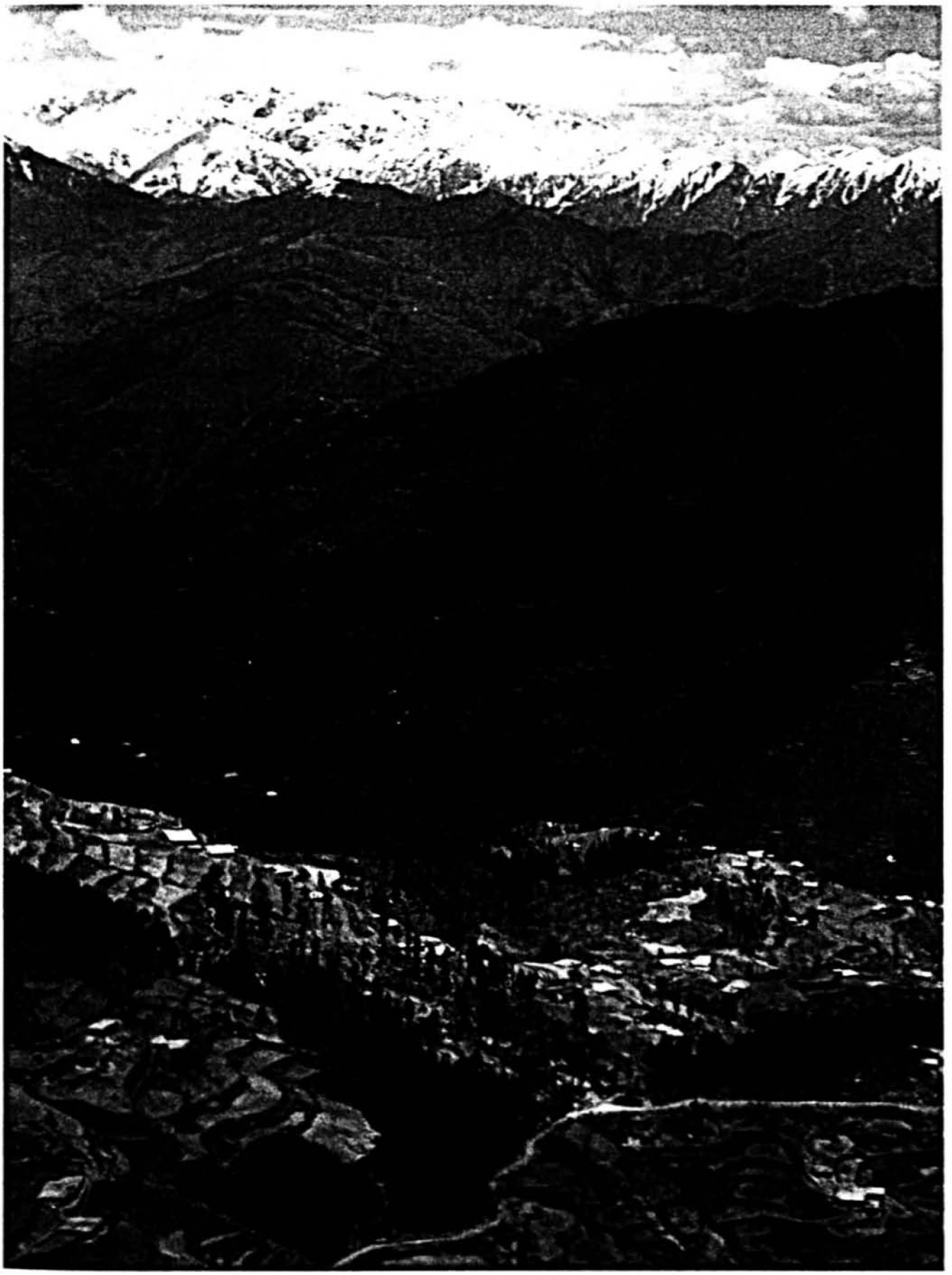


Plate 2.2: General view of the upper Swat Valley and Hindu Kush

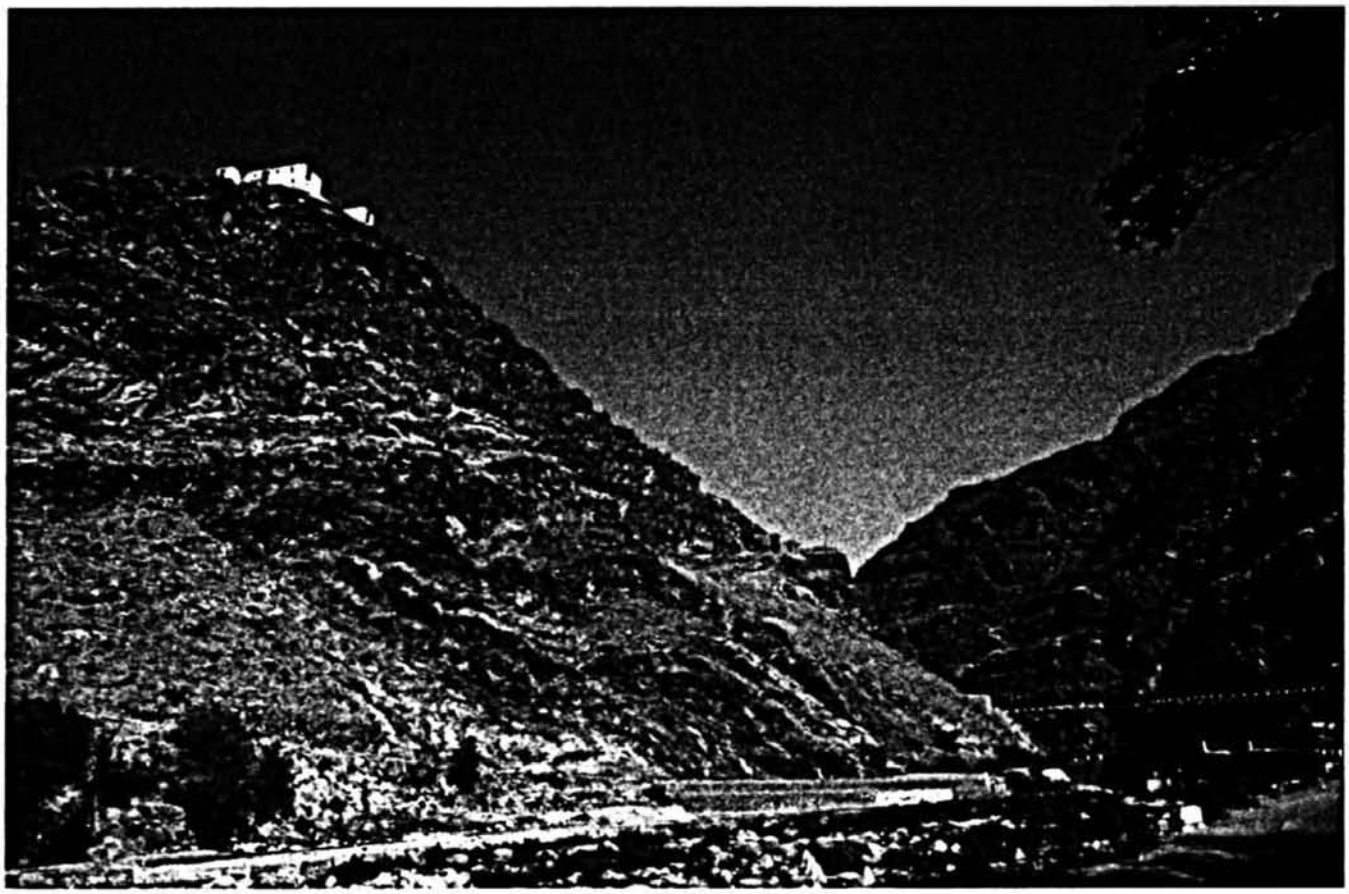


Plate 2.3: General view of the Khyber Pass

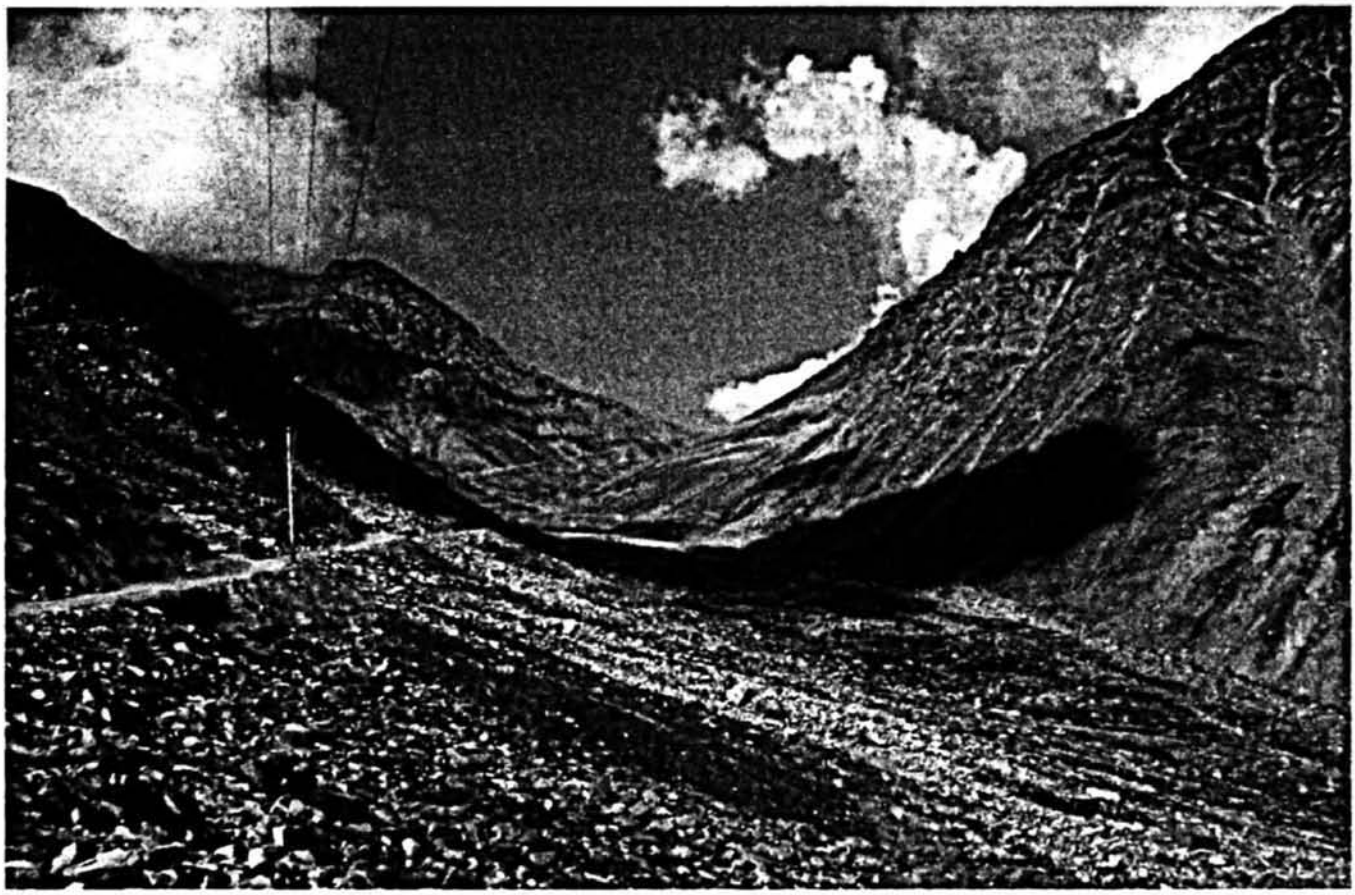


Plate 2.4: General view of the Lowari pass from Dir

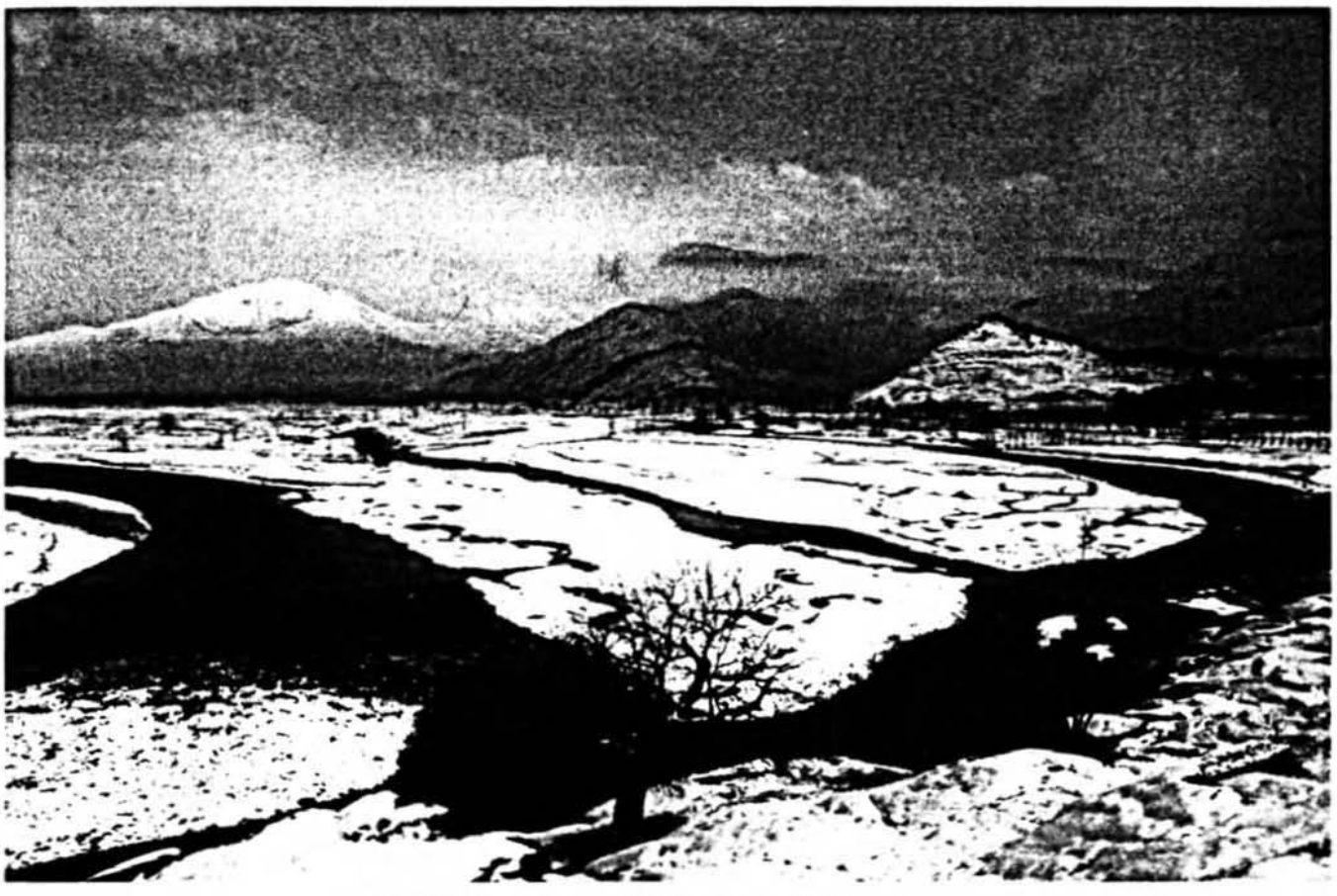


Plate 2.5: General view of the lower Swat Valley under snow

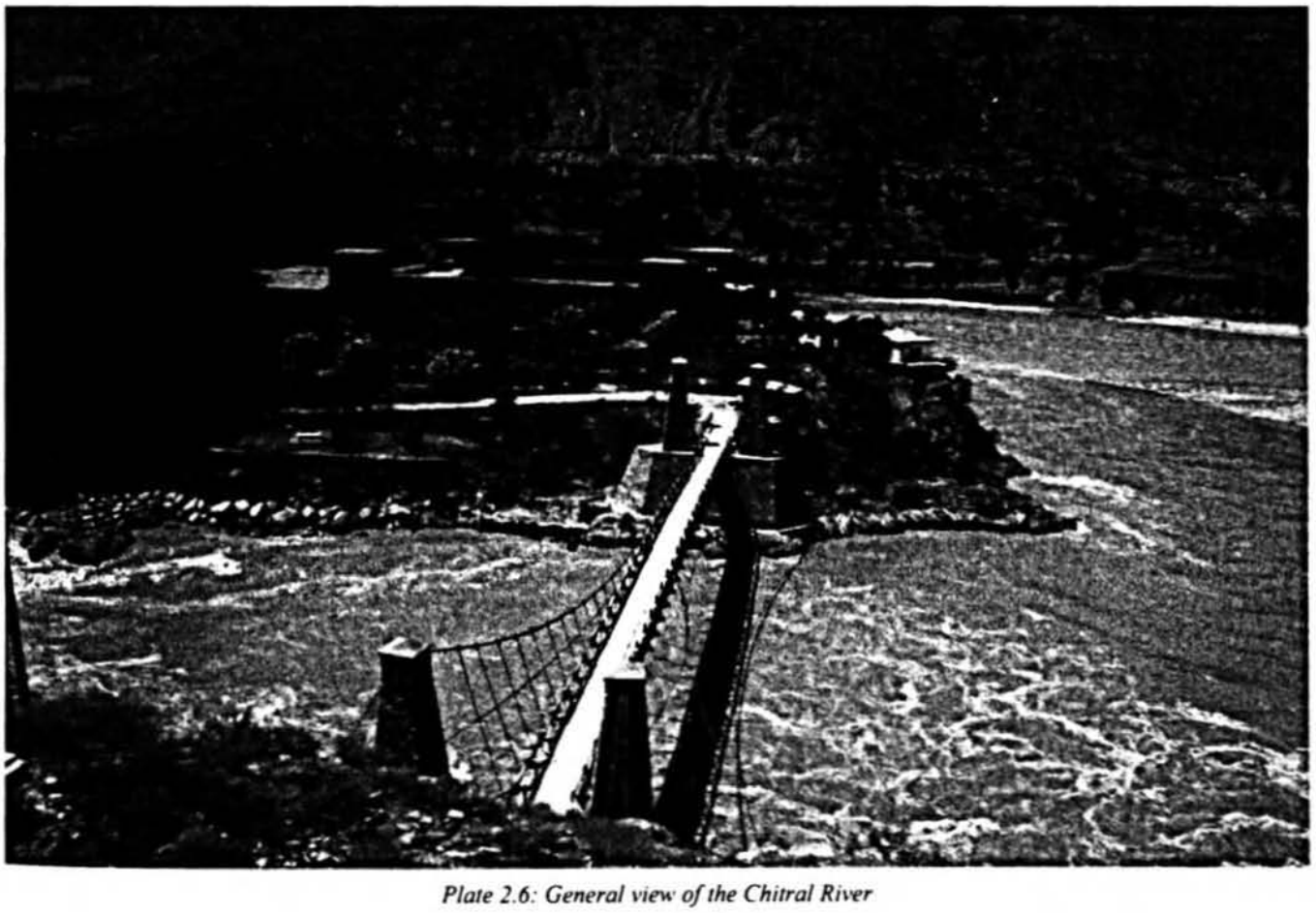


Plate 2.6: General view of the Chitral River

Plate 2.7: General view of the Kabul River near Charsadda

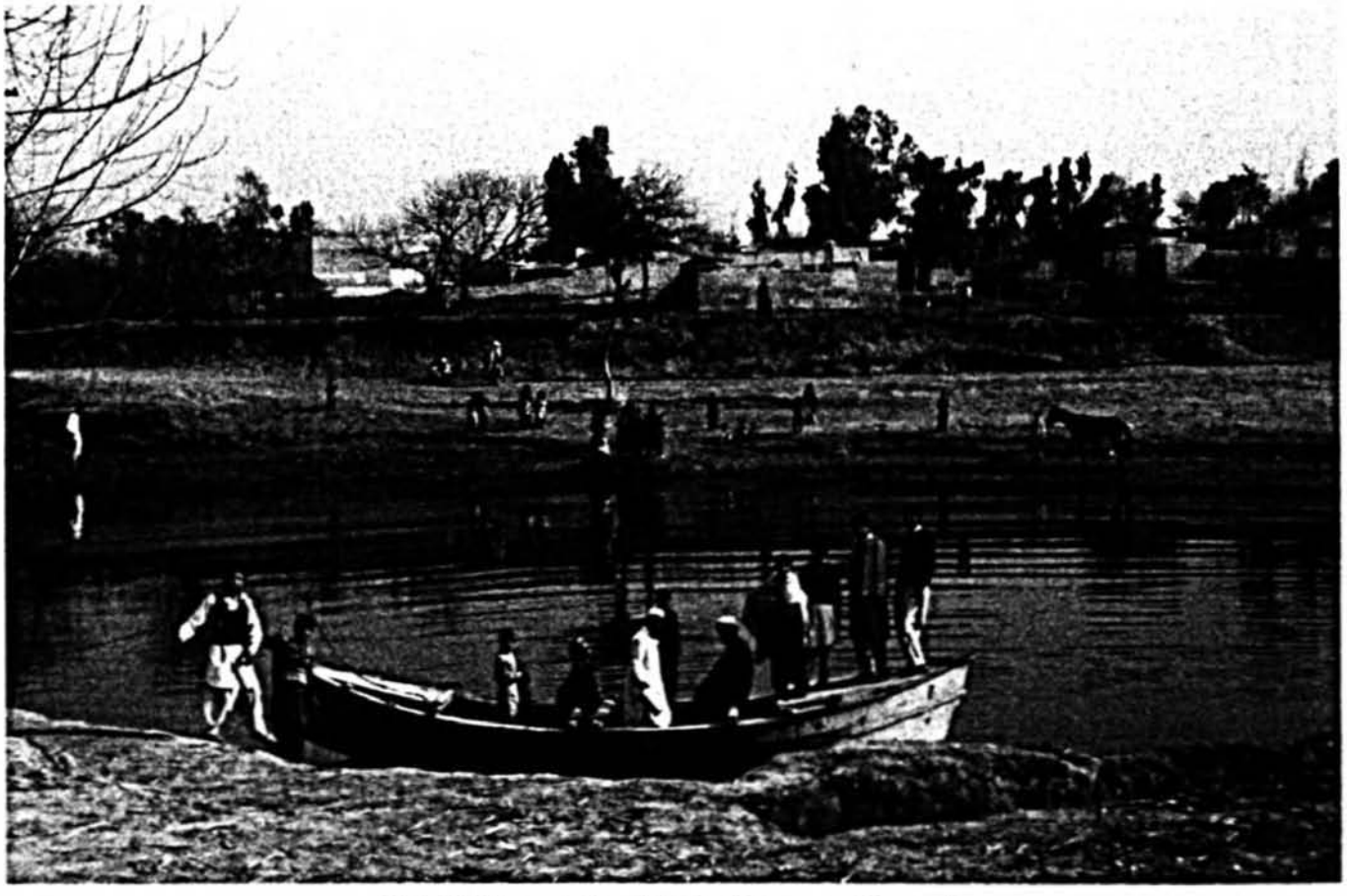


Plate 2.8: General view of the Swat River near Charsadda

CHAPTER 3

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

Robin Coningham

3.1 INTRODUCTION

Interest in the Bala Hisar of Charsadda as an archaeological site has been ongoing for over 160 years, beginning in the early 1830s, with intermittent excavation in 1882, 1903 and 1958. The origins of this interest must lie in attempts to identify the historical topography of the region using classical descriptions of Alexander the Great's conquest. As this involved the matching up of archaeological sites with historically recorded cities, the Bala Hisar of Charsadda, standing over 20m above the flood plain, was an obvious site to be studied. In the 1830s General Court argued that the mound of the Bala Hisar of Charsadda was the location of ancient Nysa whilst others agreed that it was ancient Massaga (Court 1836: 479). Later, General Sir Alexander Cunningham concluded that it was the site of Pushkalavati or 'the Lotus City', the ancient capital of Gandhara, also as known as Peukela or Peukelaotis to the Greeks (Cunningham 1864: 89). This identification was later corroborated by Marshall's find in 1903 of an inscription at Ghaz Dheri, a small monastic site some 1.6km from Charsadda, which read 'Pukhala visae' or 'in the district of Puskala' (Marshall 1904: 176). Although not all were convinced of its correct identification (Foucher 1915), further evidence was taken from the abundant presence at the site of sherds impressed with lotus decoration, of which Wheeler stated 'I... cannot help suspecting more than a coincidence in the association of the Lotus Bowls with the Lotus city – a 'Present from Pushkalavati' (Wheeler 1962: 35). Wheeler categorically accepted this identification and furthermore believed that he had identified the very defences which had stood before Alexander and his troops. Alexander's presence at the site, and the subsequent installation of a Greek garrison, offer a valuable opportunity to study the dynamics which were associated with the appearance of the Greeks in the region as well as offering an absolute historical framework. Such an opportunity can be seen to mirror the so-called 'promise of Kandahar' (Helms 1982: 8), still largely unfulfilled, and the fulfilled promise of the Hellenistic city of Ai Khanoun (Bernard 1968), both in Afghanistan.

3.2 THE PROMISE OF CHARSADDA

The 'promise' of Charsadda, or rather the promise of the Bala Hisar of Charsadda, is not only concerned with the evidence of the Greeks, but also in the presence or absence of their imperial predecessors: the Achaemenids or Persians (Wheeler 1962: 3) (Map 3). Although there is no specific mention of Pushkalavati prior to the coming of the Greeks, Herodotus records that the region of Gandhara had been a province or satrapy of the Persian Empire (ibid.), a region also mentioned in the Behistun inscription of Darius I (c. 518 BC) (Plate 3.1). Charsadda stands strategically at the confluence of the Swat and Kabul rivers, on routes from the west and central Asia, within the fertile Vale of Peshawar, features which encouraged Wheeler to assume that it represented the location of a Persian provincial capital (ibid.: 4–5) on the road to the easternmost Achaemenid capital: Taxila. The Roman historian Arrian even records that the name of the ruler or governor of the city was Astes and that he died in the attempt to defend the city (Wheeler 1968: 97). It is clear that the three probable eastern Persian capitals, Kandahar, Taxila and Charsadda, share a very similar feature: a largely artificial acropolis or citadel. Kandahar's citadel measures 200m by 200m and 30m high (Helms 1982: 11), Taxila's flat-topped Hathial mound 240m by 160m and 30.5m high and Charsadda's Bala Hisar 320m by 274m and 22.25m high. Although the citadels may appear similar in form, other archaeological evidence for Achaemenid occupation is scarce. Kandahar yielded a bilingual Asokan inscription in Greek and Aramaic, suggesting knowledge of Persian administration, an Achaemenid style casement fortification wall and a fragmentary Elamite tablet of the Achaemenid period (ibid.: 13). Evidence from Taxila includes the Aramaic Asokan Piyadasi inscription (Marshall 1951: 15), silver bent bar coins (ibid.: 14) and Persian-type stamp seals (ibid.: 674). However, there is no comparable evidence from the Bala Hisar of Charsadda suggesting that, if such material exits, its levels have not yet been encountered.

As mentioned in Chapter 1, interest in the Bala Hisar of Charsadda is not merely restricted to the presence or absence of Greeks or Persians but also to the very emergence of cities in the region. It had been made quite clear by Wheeler that he assumed that cities in south Asia's second urbanisation were a colonial implant, first by the Achaemenids and then by Greeks (Wheeler 1959: 172). Evidence supporting this theory appeared to come from the absence of earlier urban settlements in the region between the collapse of the Harappan or Indus civilisation and the 6th-century occupation of the region by the Persians. Such an assumption, however, may now be refuted by the presence of large incipient urban pre-Achaemenid settlements (Coningham 1995: 54–72). Some

of these early urban settlements even have evidence of large-scale defences, for example, the settlement at Kandahar was fortified with a 14m wide clay rampart during the first half of the first millennium BC (ibid.). Some of these early centres were also sizeable settlements, and Allchin has suggested, based upon the distribution of Red Burnished Ware, that the pre-Achaemenid settlement at Taxila covered an area of at least 13 hectares (Allchin 1993: 78) (Plate 3.2). Furthermore, it appears that this pottery type, 'Red Burnished Ware', closely links the two postulated Achaemenid provincial capitals, Taxila and Charsadda, to an incipient urban period preceding Achaemenid contact. This relationship is further expanded by the report of similar sherds from Akra Dheri in Bannu (Khan *et al* 2000). Such evidence allows us to start questioning existing models for the emergence of urban forms in south Asia's Early Historic period. Are they Persian and Greek colonial implants or are they part of an internal rise to complex society? Finally, when were these communities drawn into the developments to the east and by how much did this predate the expansion of the Mauryan Empire as represented by the Asokan rock edict at Shabazgarhi (Plate 3.3)? Only archaeological investigations at the Bala Hisar of Charsadda and Hathial mound at Taxila can answer such questions.

3.3 H.W.B. GARRICK 1882

Although identified as the ancient city of Pushkalavati or Peukelaotis by Sir Alexander Cunningham in 1863 (Cunningham 1864: 89), the first formal archaeological investigations at the site did not commence until 1882 under his assistant H.W.B. Garrick. Garrick reached the site shortly after twelve days of excavations by members of the 4th Company of Bengal Sappers and Miners under secondment to the Government of the Punjab (Garrick 1882: 101). Garrick himself did not excavate the site, but described the mound as it survived and drew a plan of the substantial structures exposed on its summit by the soldiers. Garrick's work presented a plan of the remains of a fort with three gates standing on the summit of the mound (ibid.: 102) (Figure 3.1). The fort covered an area of 26,791 square metres and consisted of two portions: a northern area measuring 200m by 73m and a southern area measuring 167m by 73m. Although there were few visible structures in the southern area, Garrick identified a palace, harems, baths, barracks, wells, temples, treasuries and stables in the north (ibid.: 103). He also noted that evidence of walling was preserved in part of the western face of the mound. Although the site consisted mainly of an earthen mound some 23m high, the top 14.6m of the western aspect were still faced with brick and stone (ibid.: 105). Fragments of this wall were preserved well enough for Garrick to identify the locations of 12 bastions or towers (ibid.: 106). The structures on the summit were already in ruins when he visited the site, but local inhabitants reported that it was occupied until the beginning of the century (ibid.: 99) and that it had been dismantled shortly before the British annexation of Peshawar in 1849 (ibid.: 100). Since Garrick's time, all that remains of these structures are the empty robber trenches on the summit of the Bala Hisar, so well illustrated by Wheeler's photographs (Wheeler 1962: Plate VIA) (Plate 3.4). Garrick also conducted some investigations at the nearby site of Shahr-i-Napursan (1882: 108), whilst the sappers investigated the mound of Mir Ziyarat. Gandharan sculptures were recovered from both of these sites suggesting that they marked the location of Buddhist monasteries. Although this volume concentrates on the earlier stages of the settlement's development, the later occupation of the Bala Hisar is discussed in Chapters 7 and 13.

3.4 SIR JOHN MARSHALL 1903

The second phase of research at the Bala Hisar of Charsadda was led by Sir John Marshall, Director-General of Archaeology, who excavated for two months in 1903. It is evident from Marshall's plan (Marshall 1904: fig. 4) that sizeable sections of the mound had disappeared in the intervening twenty years, leaving an smaller area measuring 19m N–S and 16.7m E–W (ibid.: 147) (Figure 3.2). The reason for the disappearance of much of the mound was that local farmers were removing soil from the mound in order to dress their fields (Wheeler 1962: 18). The majority of the standing ruins on the summit had also been quarried by local villagers, reducing them to heaps of debris. Almost all the evidence for walling around the summit had been undermined, leaving a single turret foundation in the south-west corner (Marshall 1904: 148). Marshall, wishing to avoid the complex of later buildings planned by Garrick, excavated a series of deep trial trenches on the north, east and western edges of the summit. In the western trenches, at a depth of 1.5m, he found evidence of a 1.3m thick and 3.8m high wall running for some 18m long (ibid.: 148). As this wall was constructed of regular diaper masonry, Marshall noted that it had close affinities with Buddhist monastic structures in the region (ibid.). Close to the centre of the summit he opened up a further trench and exposed a series of 'Muhammadan' remains, presumably the bathing houses of Garrick's plan (Figure 3.1). His trench revealed the interior of a large hall and chamber. The hall, apparently open-ended and oriented N–S, was 12m and 5m wide and had a chamber 5m wide and 2m long with three niches at its southern end. The eastern wall, consisting of plaster-coated brick, was pierced by at least three windows, and the entrance to the chamber had originally been arched (ibid.: 151). Although the foundations of this structure were close to the surface of the summit, some 4.5m deep, the absence of finds of coins and characteristic ceramics prevented Marshall from accurately dating it.

Marshall also investigated a number of other monuments in the immediate vicinity of the mound. Mir Zarat, situated 2.4km further up the Swat River, was one of the first sites tackled in an attempt to identify Buddhist monasteries in the immediate hinterland of the Bala Hisar of Charsadda. The results of the excavation were inconclusive as the site had been badly disturbed but Marshall believed that it had probably been a monastic site (ibid.: 160). He then investigated two small mounds 1.6km to the east of Mir Zarat, Palatu and Ghaz Dheri. The former mound yielded the plan of a badly robbed out monastic

:omplex consisting of a stupa and residential area (ibid.: .64). Marshall recovered the remains of over 80 fragments of stone Buddha and Bodhisattva statues and 17 stucco ones showing the relative importance and wealth of this ite (ibid.: 168–172). The latter mound, Ghaz Dheri, also vielded evidence of monastic occupation in the form of a 10m square stupa base and courtyard, and the remains of some 19 sculptures (ibid.: 177). Despite Marshall's work at the Bala Hisar of Charsadda, the actual function and dentity of the mound itself was still unclear and Foucher suggested that it represented the core of the massive stupa narking the point where, in a previous existence, 'the Buddha gave his eyes in charity' (1915: 14). Indeed, for Foucher, the promise of Charsadda lay in links with the historical geography of Gandhara as described in the 7th century AD pilgrimage of Hiuan-tsang (Xuanzang) (ibid.) Map 4).

3.5 SIR MORTIMER WHEELER 1958

After a gap of 55 years the third phase of work at the site was begun by Sir Mortimer Wheeler, who had already dentified the site's potential when Director-General of the Archaeological Survey of India (Wheeler 1950). Wheeler's work at the Bala Hisar of Charsadda lasted only seven weeks but during this time he opened trenches in five areas (Figure 3.3). His first trench, Ch. I, was a stepped section, 20m long and 9m wide, which cut from he most recent occupation on the mound's summit to the natural over 20m below (Wheeler 1962: 18) (Plate 3.5). Wheeler used this trench for the construction of the chronological sequence of the site (Figure 3.5). His section clearly shows the superimposition of floor after floor confirming that the mound was definitely an artificial structure rather than a natural outcrop (Plate 3.6). Wheeler believed that the sequence in trench Ch. I ran continuously from c. 530 BC until c. 4th century AD with later historic material in the uppermost levels (Wheeler 1962: 33) (Figure 3.4). A further trench, Ch. II, was located half way between the Bala Hisar and the slightly lower mound 100m to its east. At this position a 6m square trench was excavated in order to investigate the relationship between the two mounds and to explain the obvious depression separating them. As noted in Section 2.2, a grey alluvial sand was encountered at a depth of 4m and interpreted as representing the original course of the Sambor rivulet, diverted in antiquity by the expanding settlement (Wheeler 1962: 23) (Figure 3.5).

Now knowing that the earliest settlement did not extend as far as Ch. II, Wheeler sought to locate the edge of the tell by cutting a huge trench towards Ch. II. Although this new trench, Ch. III, was divided into a sequence of 11 smaller trenches (A to K), it was in effect 76m long and between 2.6m and 10.6m wide. Unfortunately the full section of Ch. III was never published, but a defensive ditch was identified in its final trenches, J and K. Wheeler expanded J-K in order to expose more of the ditch until it covered an area 17m by 10.6m. The ditch was 4.5m wide and 2.7m deep and was backed by a shallow depression some 2.4m wide (Wheeler 1962: 25). Wheeler identified this latter feature as having contained a rampart made from the excavated spoil of the ditch, and dated it to the time of the Alexandrian conquest. Seven additional slot trenches were excavated along the eastern edge of the mound confirming the course of the ditch. Wheeler also investigated the eastern mound with trenches Ch. IV and V (Wheeler 1962: 28) (Figure 3.6). Ch. IV was 6m square and struck natural clay at a depth of 2.1m whilst Ch. V was about 21m E–W and a maximum of 21m N–S. A series of superimposed house structures with a least five phases were identified in the latter trench, providing a date of the third and second centuries BC for the beginning of occupation at this locality. Wheeler did not restrict himself to the Bala Hisar of Charsadda but was also responsible for the discovery of the site of Shaikhan Dheri as its successor site. He identified the robbed out remains of a large cardinally planned city site with division into sectors of 36.5m square and correctly likened it to the city of Sirkap at Taxila (Wheeler 1962: 16). This discovery led to the excavation of Shaikhan Dheri by Professor Dani (Dani 1966). When we conducted a contour survey of the Bala Hisar mound in 1996, it became very clear that Wheeler's largest trench, Ch. I, had severely destabilized part of the eastern edge of the mound and had resulted in the erosion of hundreds of cubic metres of archaeological deposits still in situ as discussed in greater detail in Chapter 4 (Plate 3.7).

3.6 CONCLUSION

Similarities have been drawn for decades between the urban sequences at Taxila and Charsadda (Wheeler 1962; Dani 1966). However, although the former has been subject to major excavations by Marshall (1951), Wheeler and Ghosh (Ghosh 1948) and Sharif (1969), the latter has been largely ignored apart from Wheeler's seven-week field season at the Bala Hisar in 1958 (Wheeler 1962) and Dani's two seasons at Shaikhan Dheri in 1963 and 1964 (Dani 1966). This imbalance has continued despite the crucial role that scholars have allocated to the Charsadda's sequence, as illustrated by its inclusion within all the major attempts to create chronological frameworks for the region (Stacul 1969; Tusa 1979; Dittmann 1984; Vogelsang 1988; 1992). For these reasons, the Charsadda (Pakistan) Project, was established in order to test a number of the assumptions and findings of the earlier scholars who have worked at the site as well as to test assumptions made by scholars attempting to synthesise or reanalyse Wheeler's earlier work. As already noted in Chapter 1, we identified our primary aim as comprising the study of the nature of the origins and development of the early sequence of the site with the following objectives: to provide a chronometrically dated artefact and ceramic typology for the lowest levels; to provide a chronometrically dated structural typology for the lowest levels; to provide material correlates for the initial occupation of the mound; and to compare the phased development of the settlement at Charsadda with that of other sites within the region. We approached these objectives in greater detail selecting specific issues to test during each field season. For example, Wheeler (1962: 6) had dismissed earlier sighting of fortification walls around the Bala Hisar's cliff-like sides by

Garrick (1882: 99) and Marshall (Marshall 1904: 146). We decided to test this assumption in 1994, and successfully identified the presence of a major block of unbaked mud-brick walling in the eastern side of the mound, a feature further discussed in Section 5.4. It should be noted, however, that our continued reference to, and discussion of, the research of Sir Mortimer Wheeler at the Bala Hisar of Charsadda should not be taken as criticism of his contributions. Indeed, the following chapters and discussion are dependent on Wheeler's earlier findings and explanations, and whilst we argue for a much earlier absolute chronology, we can confirm that his relative chronology still stands and that his premise that iron was present in the very earliest levels at the Bala Hisar, although discounted by some (Vogelsang 1988: 106), is fully confirmed. It is surprising, however, that Wheeler chose not to link his key ceramic forms and wares from the basal levels of the Bala Hisar of Charsadda with similar material published by the Italian mission in Swat (Tucci 1963). This omission was repeated in his book Flames over Persepolis (1968), six years after the publication of Charsadda, despite the publication of a number of earlier Italian reports, including Stacul's important synthesis Preliminary report on the Pre-Buddhist necropolises in Swat (1966). Despite this omission, Wheeler was certainly the first scholar to make the clear link between the urbanisation of the Ganges basin and the lower levels of the Bala Hisar (Wheeler 1962: 40), a theme not subsequently investigated until the work of Vogelsang in 1988, demonstrating that at this crucial period of urban development the two regions were closely culturally linked, a theme which we will develop further within this volume.

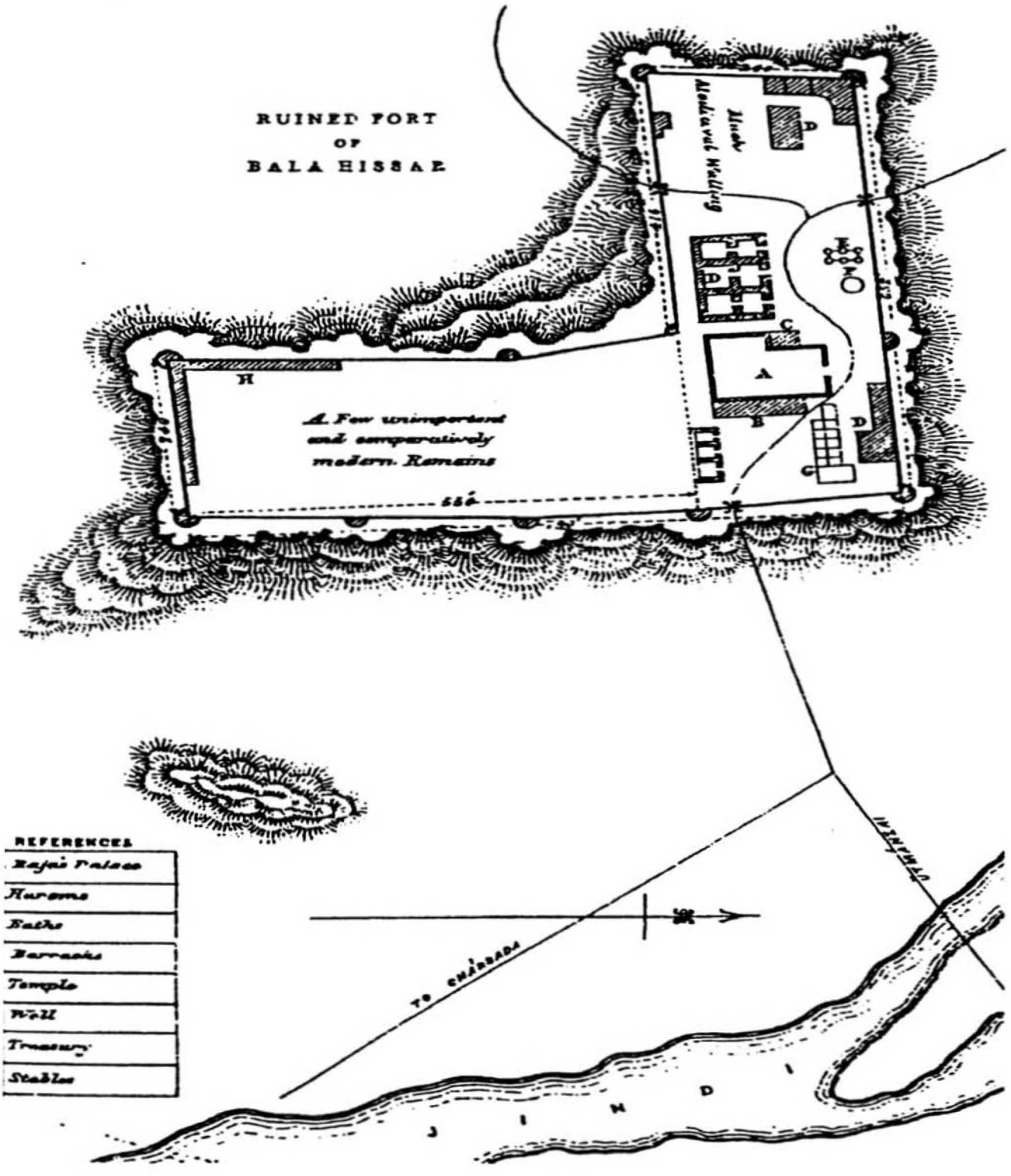


Figure 3.1: Garrick's plan of exposed structures on the summit of the Bala Hisar

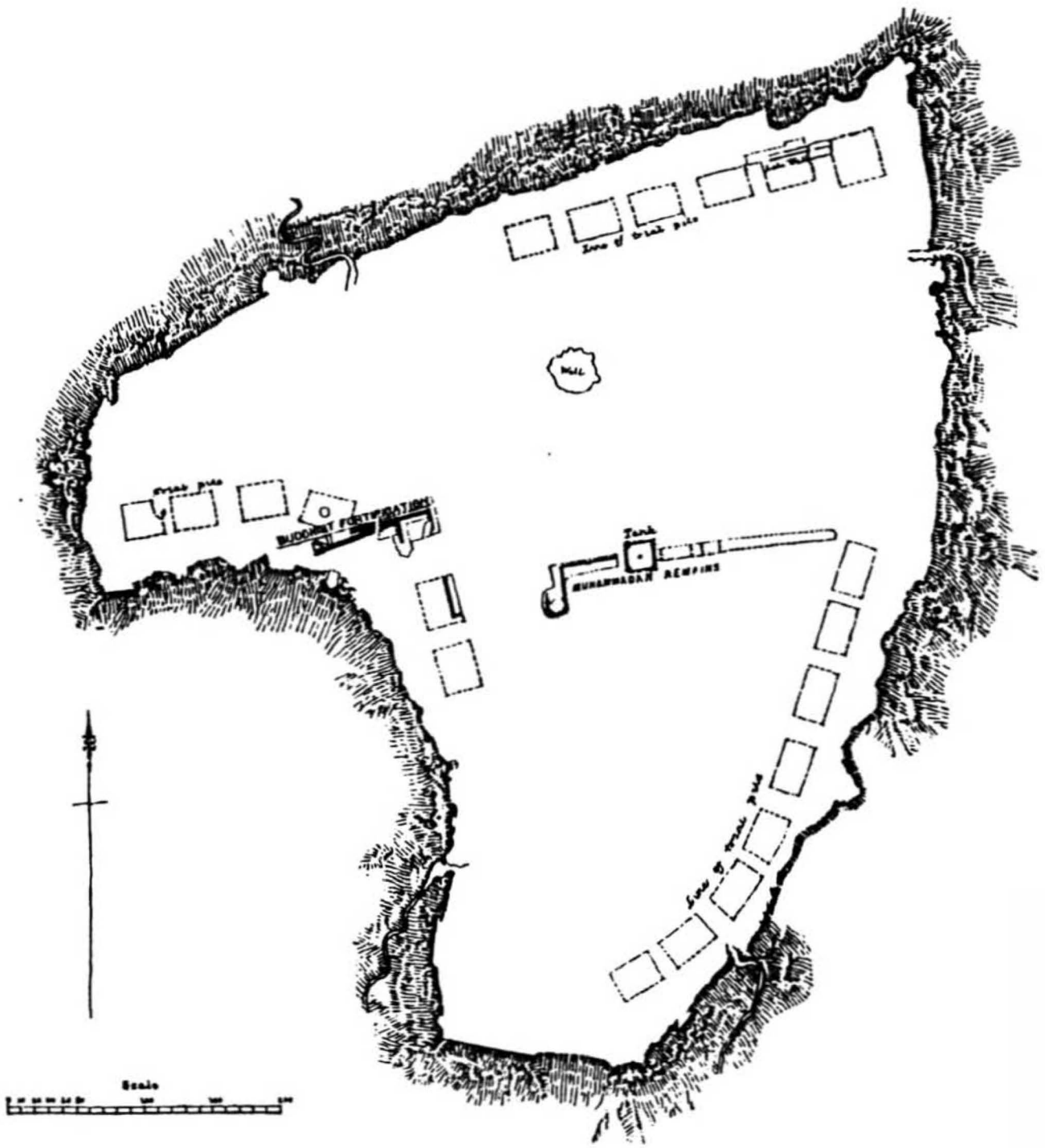


Figure 3.2: Marshall's plan of exposed structures on the summit of the Bala Hisar

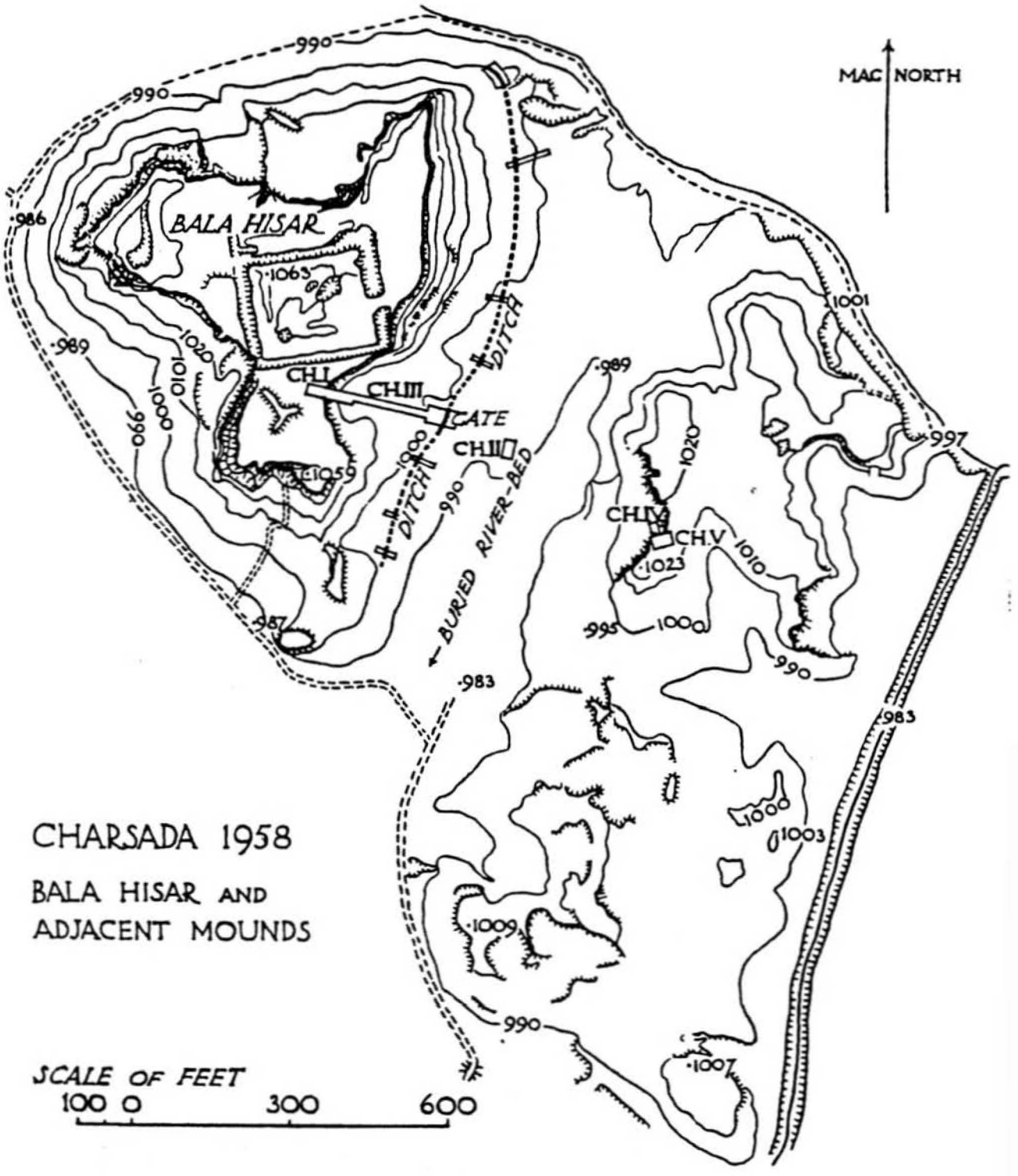


Figure 3.3: Plan of Wheeler's trenches at the Bala Hisar

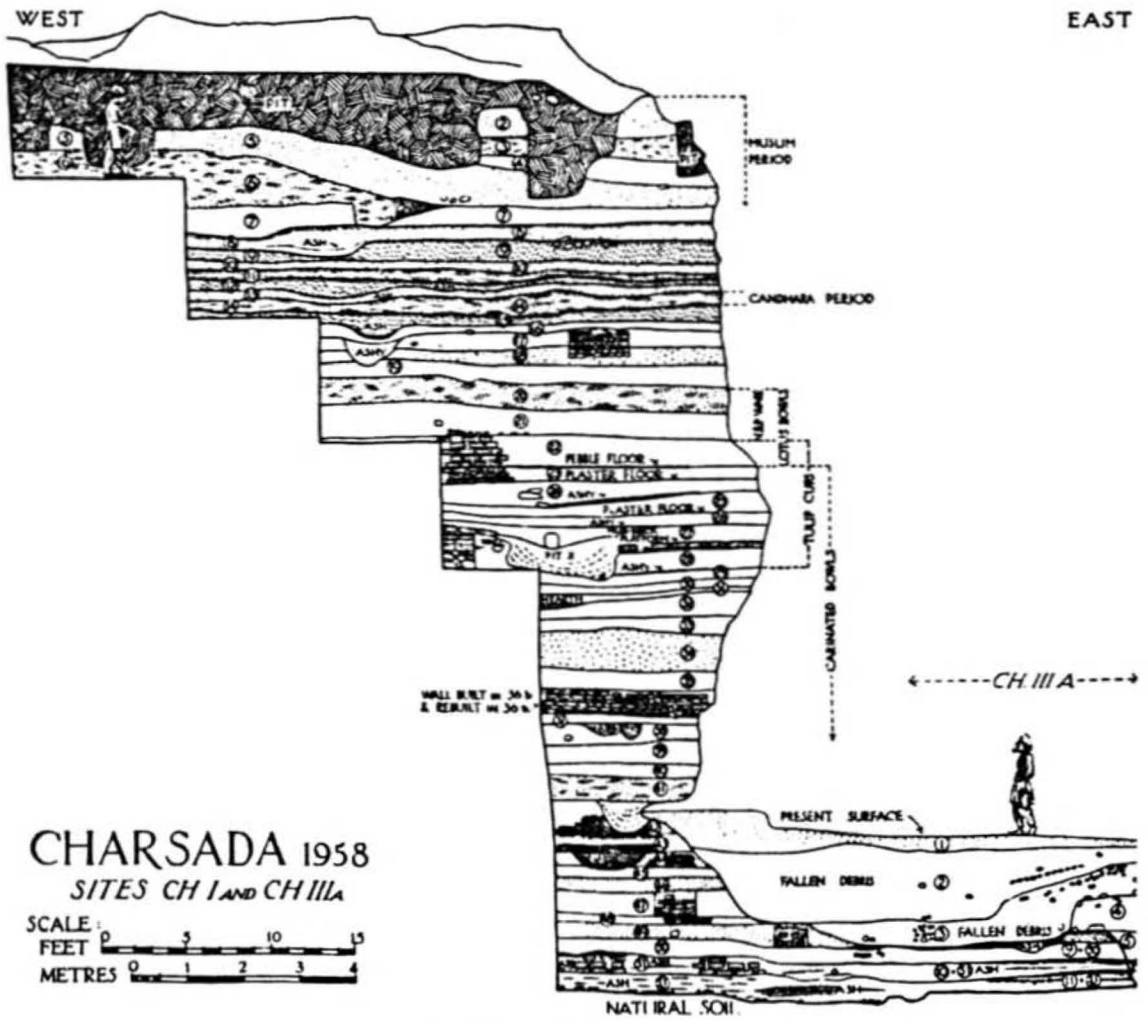


Figure 3.4: Section of Wheeler's trench Ch. I

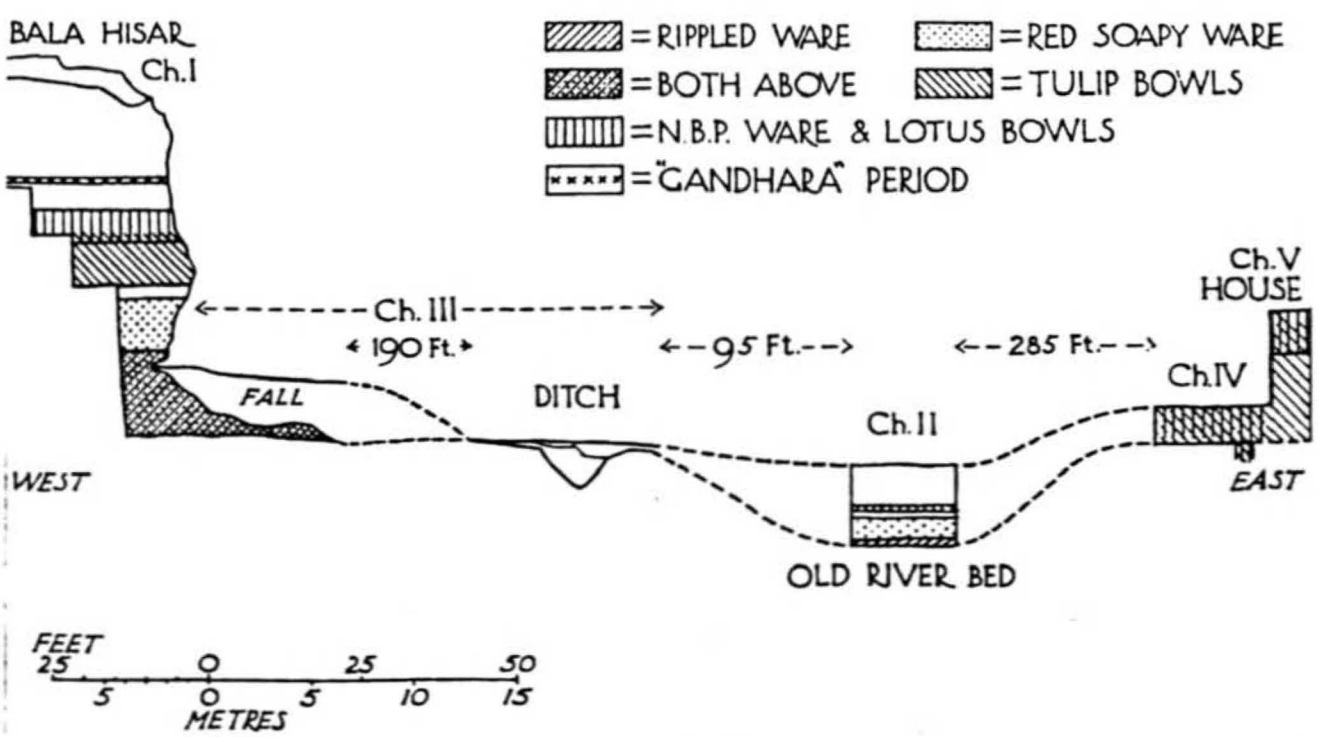


Figure 3.5: Wheeler's profile across the Bala Hisar to the eastern mounds

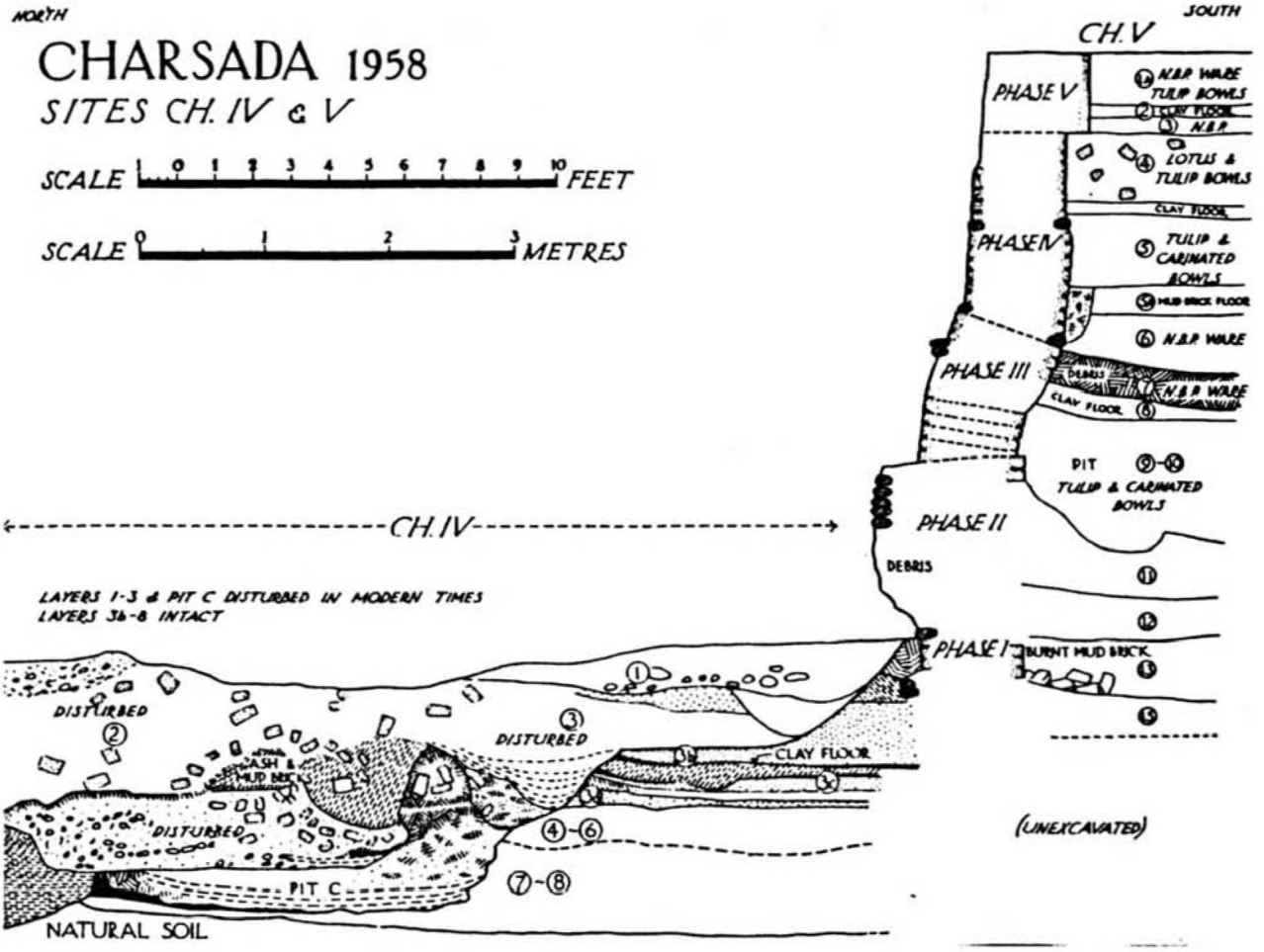


Figure 3.6: Section of Wheeler's trenches Ch. IV & V

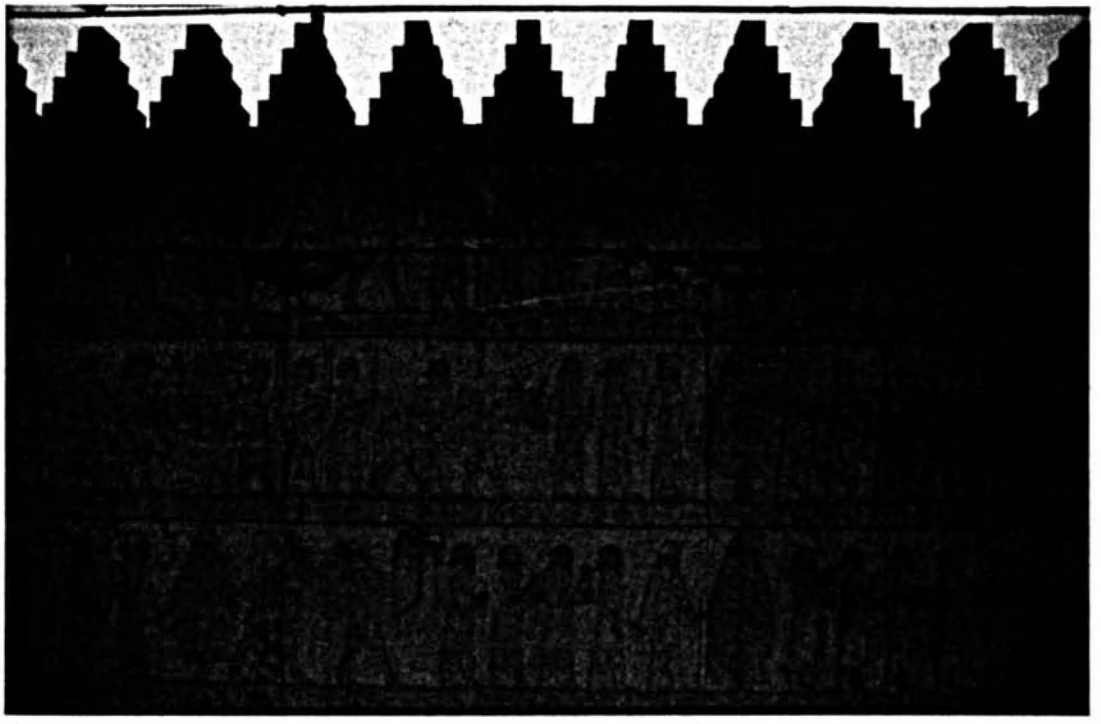


Plate 3.1: Bas-relief of Gandharans and Bactrians bringing tribute on the East Staircase of the Apadana of Persepolis

Plate 3.2: General view of the Hathial mound in the Taxila Valley

Plate 3.3: Asokan rock edit at Shabazgarhi

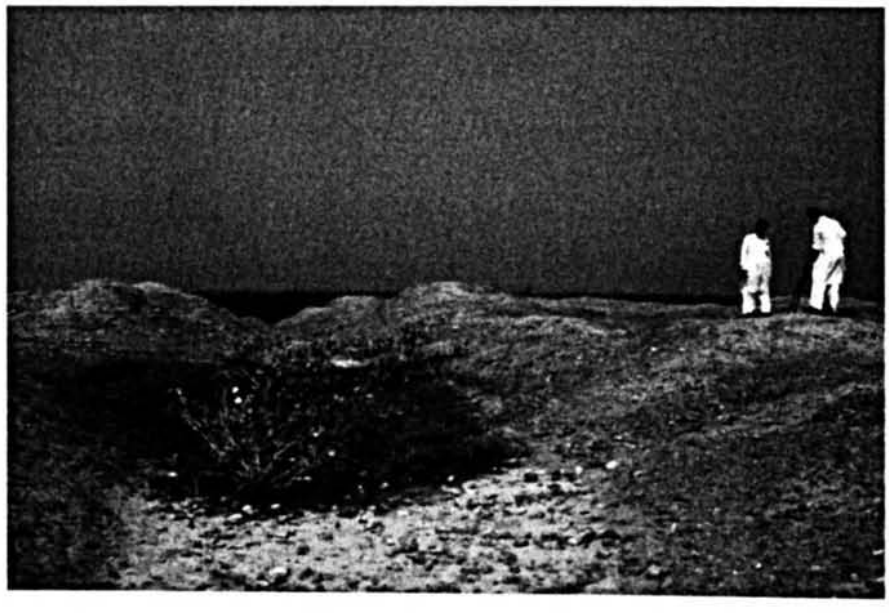


Plate 3.4: Robber trenches of the brick structures on the summit of the Bala Hisar

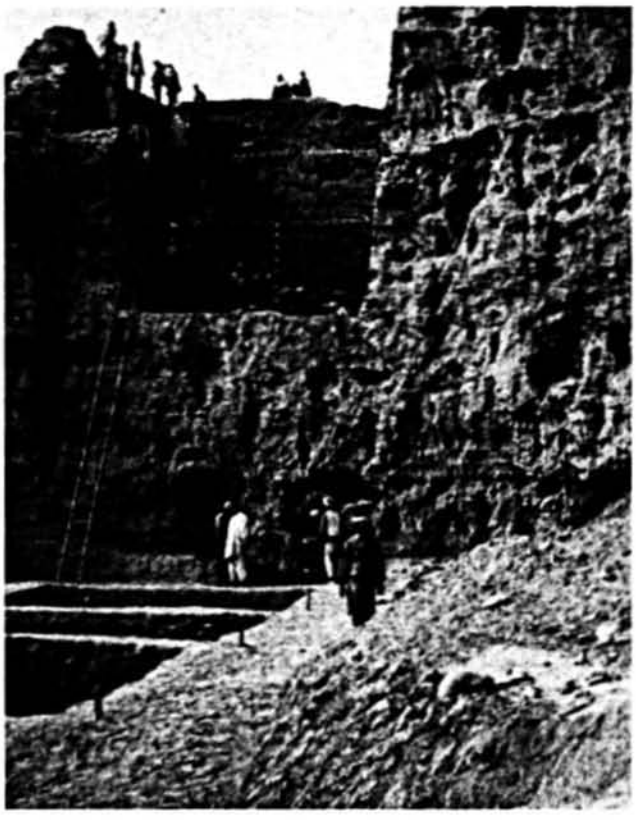


Plate 3.5: Trench Ch. I under excavation in 1958 (courtesy Sylvia Matheson)

Plate 3.6: David Stronach at the base of trench Ch. I in 1958 (courtesy Sylvia Matheson)

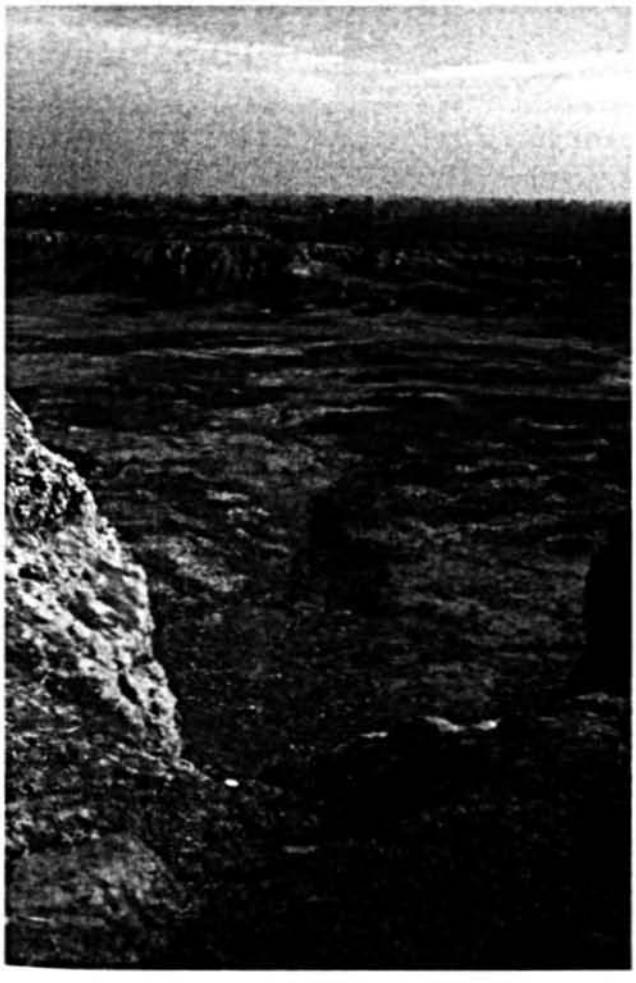


Plate 3.7: Modern view of the damage from trench Ch. I

CHAPTER 4

THE NON-INTRUSIVE SURFACE SURVEYS

Armin Schmidt & Briece Edwards

4.1 INTRODUCTION

To aid our interpretation of the Bala Hisar of Charsadda, the intrusive investigations of the site were complemented by a programme of non-intrusive surface surveys. The strategy for these field-based activities was to develop a program of separate activities and components, which could easily be conducted by teams of two or three people. Although each component was designed as a separate research element, they were subsequently integrated with each other to gain a more comprehensive understanding of the ancient cultural processes at the site as well as the site taphonomy of today. In so doing, it was possible to link our new findings with evidence from the excavations carried out in 1958 (Wheeler 1962) and to demonstrate the relevance of interpretations based on an integration of structural and small finds remains (Coningham & Edwards 1997). Our strategy utilised the following techniques: the recording of elevations at densely sampled positions, the recording of surface features such as wall foundations and surface cuts, the conducting of both fluxgate gradiometer and earth resistance surveys and, finally, the conducting a complete surface collection at 20 metre intervals. To allow a joint interpretation of all available spatial data it was deemed necessary to digitise and georeferenced all information so that they could be integrated in a Geographical Information System (GIS); ESRI's ArcGIS was used for this project. It is often only possible to arrive at an archaeological interpretation if the spatial relationship of all data sources can be accurately evaluated. For example, the identification of a geophysical anomaly as being of 'high earth resistance' requires an archaeological contextualisation to be interpreted as, for example, the 'loose fill of an old excavation trench'. It is hence necessary to collect and carefully combine all available spatial information. The data sources used for this project and their georeferencing are outlined below.

4.2 DATA SOURCES

Sir Mortimer Wheeler reported the findings of his 1958 excavation campaign in a monograph, illustrated with section drawings and sketches of the site layout (Wheeler 1962). In particular, Figure 3 clearly shows the location of his trenches Ch. I to Ch. V (ibid.: 11). He also marks the line of the defensive ditch as identified in seven sondage trenches and for further reference these trenches will be labelled here as So 1 to So 7, counting from south to north. The top of the mound is clearly outlined and contour lines are drawn at 10 feet intervals (c. 3m). Wheeler's Figure 4 is an enlargement of the top of the mound and of the outlines of the mound as they were recorded by Marshall in 1903 and it also shows the defensive ditch as it appeared in Ch. III (ibid.: 19). It is notable that this diagram has a very different drawing style to Figure 3, both for the hatchures, indicating visible earthworks, and the markings of the slopes of the mound. They seem to vaguely emulate Marshall's original drawing style (Marshall 1904: Figure 4). On Plate IV, Wheeler presents an aerial photograph taken by the Pakistan Air Force (Wheeler 1962). It shows the tents of Wheeler's team, the strong shadows thrown by the huge cut of trench Ch. I and the two box trenches of Ch. II, that is Ch. IIa and Ch. IIb. As there is no indication of the box trenches that form Ch. III, it can be safely concluded that the photograph was taken between the completion of Ch. II and the start of Ch. III. The photograph was taken vertically with the sun shining from approximately south-south-west. The shadows on the northern side are very strong but given the high rise of the mound it must be concluded that the photograph was taken not long after noon. The photograph shows many details of the site and is an excellent reference for the actual location of Wheeler's trenches.

For an accurately referenced base map of the area NASA's panchromatic Landsat 7 ETM+ data (Enhanced Thematic Mapper Plus) were used with a 15m spatial resolution and the source of this dataset was the Global Land Cover Facility, University of Maryland (GLCF 2006). The data are provided in Universal Transverse Mercator projection, based on the WGS84 geoid (UTM-WGS84). The area in question is within the UTM strip 42N and the data were recorded on 28 September 2001 as path 151, row 036. For a higher resolution representation of the area Corona satellite imagery was acquired from the U.S. Geological Survey. The image (DS1041-1083DF093) was taken on 15 May 1967 and the spatial resolution recovered from the positive print is approximately 10m. The image shows the Bala Hisar mainly through strong and long shadows to its north-east (i.e. recorded in the late afternoon).

A detailed topographical survey of the Bala Hisar and its eastern mounds was undertaken by the authors and several staff and students from the Universities of Peshawar and Bradford in 1997 using a Leica Total Station EDM. A network of 27 temporary stations was established to cover the mounds from different directions. Subsequently a total

of 3000 survey points were recorded, some of which were used to identify features such as roads and field boundaries, others only recorded the site's topography. All topographical data were used to derive a Digital Terrain Model (DTM) using Natural Neighbours Interpolation, which is equivalent to a Triangulated Irregular Network (TIN). Contour lines at 1m intervals and slope percentages were calculated using standard GIS functions (Figure 1.1). From these data a 3D visualisation model of the site was derived, using the slope value for colouring its flanks (Colour Plate 1.1). In addition, earth resistance and fluxgate gradiometer surveys were also undertaken between the Bala Hisar and the eastern mounds in 1997 subdividing the area into grids of 20m by 20m. To facilitate the interpretation of geophysical data, a detailed recording of surface features accompanied the geophysical measurements. The results of these surveys are in detail discussed below.

4.3 DATA INTEGRATION

To achieve a good level of georeferencing of all spatial data a stepwise co-registration had to be undertaken. The Landsat satellite image formed the starting point of this process as the orthorectified data provided by the GLCF are of high spatial accuracy. Using an ArcGIS affine transformation, the Corona image was rectified to the Landsat data, without any discernible discrepancies at the edges of its scene, as evaluated at the Landsat resolution level (15m). The Corona image shows the Bala Hisar mainly as shadow marks and these were useful for the subsequent georeferencing of the aerial photograph. It is estimated that the absolute error in this rectification sequence may be in the order of 15m (the Landsat resolution) when compared, for example, with a high accuracy GPS reading, but that the internal (i.e. relative) errors in the final GIS database are not bigger than 5m. This is considered to be a very good match overall. During the topographical survey high accuracy GPS positioning was not available and the survey was only referenced to itself, albeit with a high internal accuracy, estimated as about 2m across the 700m survey area (i.e. 0.3%). To find the absolute position of the survey, its contour lines were superimposed on the aerial photograph, and translated and rotated (i.e. using a similarity transformation) until the best match with the photograph was achieved, considering further erosion of the mound in the intervening years. The absolute coordinates of relevant reference stations in the topographical dataset were then noted and the DTM recalculated. The resulting topographical model and the derived slope and contours form an important dataset for further evaluation of other investigations on the site.

The detailed surface survey in the area of the geophysical investigation, recorded many features that can be identified in the aerial photograph (e.g. road, field boundary, poorly filled excavation trench). It was therefore possible to accurately locate this survey and georeference it in the GIS. This simultaneously provided the georeferencing for the geophysical survey. Wheeler's location diagram (Wheeler 1962: Figure 3) can be fitted reasonably well to the contemporary aerial photograph, although several discrepancies are visible and the eastern mounds are less well represented. From a 2nd order polynomial georeferencing of this diagram to the aerial photograph, the location of Wheeler's main trenches (Ch. I to Ch. V), the sondage trenches (So 1–So 7) and the assumed location of the defensive ditch can be derived. The accuracy of their location, however, is not very high as shown in a detailed comparison with other data sources (see below). Finally, an attempt was made to georeference Wheeler's detailed diagram of the top of the Bala Hisar (Wheeler 1962: Figure 4), although the match is poor and does not even correlate well with his own overview diagram in Figure 3, showing discrepancies in the shape of the mound's top as well as the location of his own excavation trenches. As already pointed out, the drawing style for this diagram is different and it is possible that it was more a redrawing of Marshall's diagram (Marshall 1904: Figure 4), rather than a scale drawing in its own right. It was nevertheless used to estimate the outline of the top of the mound at the time of Marshall's investigation in 1903, since Marshall's own diagram could not be satisfactorily georeferenced to the other data.

4.4 EROSION

One of the aims of the topographical survey was to evaluate the erosion of the Bala Hisar since Wheeler's investigations in 1958. Today, thousands of swallows use the cliff face of the Tell as a rookery. The birds burrow into the vertical face of the mound to make their nests, with the result that the archaeological integrity of the site is undermined and large parts of the site are lost every year. The human factor in damage at the site is just as great, though it is more concentrated as a result of local farmers removing soil to spread on their farmland in order to increase productivity. The site is now protected and these activities have ceased. For the evaluation of erosion of the main mound it was necessary to define the 'top of the mound' and compare it with the outline provided by Wheeler. Although it was attempted during the topographical survey to follow the edges of the mound as closely as possible, health and safety reasons prevented access to some areas. Connecting the recorded points therefore led to a misleading picture, where lines pass across recesses while some protruding areas are not recorded. It was therefore decided to define the current top of the mound purely from the digital terrain model compiled from all topographical data. A slope value of 30% was chosen to represent the limits of the mound's top. This value was selected based on the best fit with the edges that were recorded during the survey. A comparison (Figure 4.1) of the mound's outlines between the three investigations (1903, 1958 and 1997) clearly shows the grave erosion since Marshall's investigation but also the continued loss of soil since 1958, partly around Ch. I but also severely on the south-west flank of the mound. Where the modern 30% slope boundary protrudes over the edge of Wheeler's mound top, the topographic drop is less well defined, leading Wheeler to a more subjective interpretation as to where the edge should be drawn and hence to slight discrepancies with the current data. It can be seen that the survey highlights the con-

tinued loss of archaeological material from the site and the data may be used to monitor any future deterioration.

4.5 GEOPHYSICAL SURVEY

Geophysical methods have become important tools for the non-destructive investigation of archaeological sites, with magnetic and earth resistance prospection being the most prominent ones. The principles behind these techniques were initially applied to geological features, such as ore deposits, but when they were adapted for archaeological targets it was soon established that very different methodologies were required since archaeological features are relatively small and mostly buried at shallow depth. More importantly, the relationship between archaeological features and geophysical properties is often difficult to predict and the planning of investigations can hence be complicated. Related is the problem of interpretation and geophysical results on their own are only of limited use to resolve an archaeological problem. It is the archaeological interpretation of the results, using all possible background information such as site conditions, archaeological background knowledge, results from other investigations etc., which provides useful new insights (Schmidt 2003).

All geophysical investigations depend on the contrast in a soil property between the archaeological feature of interest and its surrounding environment, for example, the enclosing soil matrix. This is in analogy to excavations where a contrast in colour or texture is required to delineate contexts. Depending on the material property in which such geophysical contrast is found, the method of investigation can be selected. For example, a contrast in magnetic properties (magnetic susceptibility or magnetic remanence) will normally lead to distinct 'anomalies' in the data collected with a magnetometer over an area of interest (Schmidt in press). Similarly, variations in moisture content and hence electrical resistivity (e.g. a ditch that holds slightly more moisture or wall foundations that are particularly dry) lead to discernible differences in earth resistance measurements on the surface.

When analysing results from geophysical surveys it is important to consider the limitations of the techniques used. If the contrast between buried features and the soil matrix is low or the features are very deep, the signal that can be detected form the ground surface is small. External factors that affect the measurements, like small but random soil variations, and limitations of instrument sensitivity therefore determine which features can be detected. In addition, it is often difficult to predict in which material properties a contrast will show most clearly and hence which method should be employed. It is therefore often advisable to use the two standard archaeological geophysical techniques together (earth resistance and fluxgate gradiometer surveys) to obtain an overview of the features that may be detectable on a site. The spatial sampling resolution (e.g. 1m x 1m) has to be selected so as to balance the speed of data acquisition with the lateral definition of detected anomalies.

4.5.1 Geophysical surveys in south asia

The geophysical surveys at the Bala Hisar of Charsadda form part of a larger project, which aims to evaluate the use of archaeological geophysical techniques throughout South Asia (Schmidt & Coningham 1999). Schmidt and Coningham have examined sites across the sub-continent (Sri Lanka, Bangladesh, Nepal and Pakistan) to identify buried remains that were invisible from the surface. The project highlights the inter-dependence of geophysical and conventional archaeological approaches since only the combined information allows to derive an overall archaeological interpretation.

In Ramagrama, Nepal, the brick foundations of several small viharas were identified through magnetometer surveys. The foundations were below the plough-soil and the fired bricks exhibited an excellent magnetic contrast with the surrounding soil, leading to very clear magnetic anomalies. Although the earth resistance survey showed some variation over the site, it did not reveal the structures in any clarity. The archaeological context of the site was explored through a careful analysis of the ritual landscape. The close proximity of the geophysical anomalies to remains of a stupa led to the interpretation of the anomalies as viharas and confirmed the high status of the stupa. The geophysical results were verified by subsequent excavations and it was concluded that the brick foundations were slightly too deep to be detected by the earth resistance measurements but that the magnetic contrast was strong enough to show the clear magnetic anomalies. At Tilaurakot, also in Nepal, earth resistance surveys revealed the outline of buried buildings as high resistance anomalies. Judging from similar structures exposed in adjacent excavation trenches it was concluded that they form a late occupation phase of this low tell mound. It is likely that the structures are made of fired bricks and their detection in an earth resistance survey therefore suggests that they are buried at shallow depth. The interpretation of these anomalies relied on the archaeological context derived from other parts of the site.

The igneous geology of Sri Lanka leads to interesting magnetometer results as geological features are often outcropping at the surface or are only buried under a thin layer of soil. They produce strong and broad magnetic anomalies. During their formation some of these rocks split into separate sections, which then acquired thermoremanent magnetism independently. As a result, they may show in a magnetometer survey as an assemblage of small anomalies, not as a single large one. To distinguish them from archaeological remains, which normally also produce small anomalies, it is necessary to obtain data over a relatively large area to form a comprehensive understanding of the geological variability across a site. Ashlar blocks hewn from igneous rock as well as cobbles derived from such parent material often exhibit the same strong thermoremanent magnetisation as the igneous rock and therefore produce a very characteristic bipolar magnetic anomaly, aligned with the stone's main axis (Schmidt in press). Alignments of stones are therefore often recognisable in magnetometer surveys and indicate the presence of archaeological features. Where small magnetic anomalies are aligned in a different direction to the underlying geology an anthropogenic origin should be suspected.

Magnetometer surveys on several sites in the hinterland of Anuradhapura, Sri Lanka, revealed wall foundations through these characteristic anomalies. The data were used to place small excavation trenches over these features.

4.5.2 Survey description

To the east of the Bala Hisar of Charsadda, geophysical surveys were undertaken with the aim to detect subsurface features without intrusive excavation. The covered area included Wheeler's Ch. II and parts of Ch. III, the line of the defensive ditch, three of Wheeler's sondage trenches across the ditch (So 3–So 5), the buried riverbed and the foot of the eastern mounds. The area was subdivided into 57 grids of 20m by 20m, an area of 2.3 hectares (Figure 4.2). An earth resistance surveys was carried out using a Geoscan RM15 with 0.5m twin probe array and a magnetometer survey was conducted with a Geoscan FM36 fluxgate gradiometer, operated in stationary mode. Both surveys recorded readings with a spatial resolution of 1m by 1m, which is deemed sufficient to detect the expected broad features.

During his excavation in 1958 Wheeler recorded a depth to the buried river bed of 4.2m (14 feet) (Wheeler 1962: 23). At such depth it was very unlikely that the riverbed would show as a geophysical anomaly. For the defensive ditch, Wheeler reported a shallow depth and that the surface had been dug into by robbers (Wheller 1962:27). Estimating from excavation photographs, in 1958 the ditch was not buried deeper than about 0.4m. At this depth, it was expected that the ditch might show as a geophysical anomaly if the fill exhibited a sufficient geophysical contrast. The top fill was reported by Wheeler to be a mixture of surface material, deposited during the deliberate filling of the ditch and thoroughly mixed by agricultural activity (Wheeler 1962: 27) and it was assumed that since 1958 additional layers of deposits had accumulated. Wheeler's trenches were backfilled with the excavated material and it was uncertain whether the potentially looser packing would be sufficient to generate geophysical anomalies.

To allow for a thorough interpretation of the geophysical results a detailed earthwork survey was undertaken over all investigated grids. Surface variations as well as the prevalent soil cover were recorded and noted as a hachure plot. Figure 4.3 shows the results of this investigation together with an overlay of Wheeler's trenches, as derived from the rectification of his location plan (Wheeler 1962: Figure 3). For Ch. II, the hatched double rectangles represent Ch. IIa (north) and Ch. IIb (south) as traced from the accurately georeferenced aerial photograph (Wheeler 1962: Plate IV). They are located 7.4m west and 1.3m north of the position traced from the location plan, demonstrating positioning errors for the latter away from the Bala Hisar. The surface depression recorded over Ch. IIa is hence assumed to be due to soil settling over the backfilled trench Ch. IIa. The traced outline of the sondage trench for the defensive ditch that lies in the north-west of the survey area (So 5) is just 10m east of a recorded depression with the approximate dimensions of this sondage trench. This is consistent with the location error observed for the position of Ch. II and it can hence be assumed that the depression marks the remains of So 5, and hence of the defensive ditch. Even considering the location error of the traced trench outlines, no correlation was found between Ch. III and any surface depressions. This is probably due to careful backfilling of this large trench and subsequent cover with scree eroding from the sides of the mound.

4.5.3 Geophysical results

The earth resistance data are shown in Figure 4.4 and overlain with the earthwork survey in Figure 4.5. There are two clear high resistance anomalies at the location of Ch. IIa and Ch. IIb, indicating that the backfilled trenches can be detected with this technique since they are sufficiently shallow and backfilled fairly loosely. Sondage So 5, however, only shows as an area of slightly lower resistance, which might be related to a somewhat higher moisture level in the depression. No traces of Ch. III can be detected in the data, although some small high resistance anomalies might be related to it. The road that crosses the area from NE to SW has a clear indication in the earth resistance data and its eastern edge shows as a low resistance anomaly.

While several of the confined high resistance anomalies are directly related to surface depressions, some other prominent anomalies bear no resemblance to any features recorded on the surface. They seem to form the edges, both in the east and the west, of the areas of higher and more varied resistance readings. In between these edges, the resistance is lower and less noisy. It is assumed that this band is related to surface drainage that has eroded some of the soil disturbances.

It was hoped that the earth resistance survey might detect the defensive ditch. As the surface depression west of So 5 was identified as the location for the ditch, the earth resistance data of the surrounding area were particularly scrutinised. A band of alternating high and low resistance values is emanating SW from this trench and it is possible that they indicate the course of the ditch. The high resistance anomaly 40m south of So 5 might in fact be caused by So 4 and the anomaly in the SW of the survey area could be related to So 3. However, apart from these possible trenches, only very marginal variations may hint at the existence of the ditch.

The magnetometer data (Figure 4.6 and with overlay of the earthwork survey in Figure 4.7) are governed by a high level of variability ('noise'). Only very few of the anomalies seem to be related to the mapped surface features (e.g. the negative linear anomaly in the SW) and even the road is not visible in the data. In fact there are several large bipolar magnetic anomalies that underlie the road. It is hence concluded that the magnetic anomalies are mainly caused by strong magnetic variations of the soil and subsoil constituents, probably due to high remanent magnetisation of individual stones or cobbles. The most remarkable anomaly is a negative rectilinear feature, just east of Ch. II, which has no correspondence in either the earth resistance or the earthwork data. The origin of this anomaly is unknown.

4.6 SURFACE COLLECTION

The strategy for the surface survey was a complete collection of artefacts found on the surface for 1m by 20m swaths running north–south along the western edge of selected geophysical grids (of size 20m ' 20m, see above). This resulted in a series of parallel survey transects between the main and the eastern mounds. Surface collection was suspended when the slope and aspect of the terrain became greater than 45° since these areas were too steep to have fully exposed artefacts still lying on the surface. The artefacts visible in those areas were only partially exposed and hence not part of the methodology. As a result, the survey was limited to the flat area between the mounds. Over the course of three days in the field a total of 34 survey transects were conducted resulting in 680 m^2 of area actually surveyed and deemed to be representative of 13,600 m^2 (Figure 4.8).

Artefacts were collected, collated, quantified, and recorded in the field. They were then separated into artefact categories (Table 4.1) and the number of occurrences for each category was counted. At the time of collection in the field, notes were taken recording surface conditions such as vegetation, concentrations of artefacts, possible wall foundations and their alignments. The results were initially logged in a spreadsheet and later transferred to a database, linked to the project GIS. The concentrations of the different artefact types were plotted as symbol plots where the size of the symbol represents the number of finds in a particular category (Figure 4.9a).

Construction material	Ceramics	Terracottas	Industrial debris	Other
Brick	Rims	Figurines	Slag	Quartzite
Stone: cobbles	Bases	Wheels		Marble
Stone: angular	Body (large)			Beads
	Body (small)			Ferrous object
	Decorated			Lithic flake
	Lids/knobs			
	Handles			
	Shaped disk			
	Spouts			
	Glazed			

Table 4.1: Artefact categories based on the surface collection survey

4.6.1 Results

As can be seen from the majority of find categories, there appears to be a division between concentrations in the eastern and western part. This is in part the result of the taphonomic processes of erosion and gravity sorting which are at work on this site. The western edge of the area corresponds to the steep slope at the base of the mound. Both Wheeler (1962) and Ali (*et al* 1998) identify this surface material as highly disturbed and as being the result of erosional deposition from the vertical face of the mounds. The eastern half of the area is subject to similar processes, although the slope of the landscape is more gradual, hence resulting in less artefact migration through gravity and erosion. However, a road though the site impacted on the recoverability of artefacts and is easily noticed in the distribution of ceramic rims (Figure 4.9a).

For the purposes of this survey, construction material was defined as bricks, cobbles and angular stones since each has been identified archaeologically as being used in the construction of walls and foundations (Dani 1966; Wheeler 1962). By distinguishing between the different materials, it is possible to relate the findings to Wheeler's relative chronology. Wheeler reports that the use of cobbles in the construction of mud brick wall foundations begins at the end of Phase I and the beginning of Phase II, corresponding with the introduction of Rippled Rim Ware (1962). The majority of the cobbles are found in the flat area between the two mounds; stratigraphically the earliest exposed material. The use of angular stone in construction is only briefly mentioned by previous excavators when describing fill material (Wheeler 1962). These angular stones were found in this survey in close association with eroded material from vertical faces of the mound. The earliest use of fired brick coincides with the earliest occurrence of tulip bowls in the 3rd century BC (Wheeler 1962: 22). The majority of fired brick was collected in the western half of the survey southwest quadrant of the survey area, while the remaining occurrences were in the south-west of the survey areas.

The overall pattern of ceramics distribution is best exemplified by the spread of body-sherds. These form islands of concentrated deposits or scatters, evenly distributed or at intervals over the survey area (Figure 4.9a). The distributions of rims and bases show very similar patterns and appear to be more evenly distributed over broader areas than the body-sherds. By processing the ceramics in aggregate it is possible to distinguish the road running from southeast to north-west beginning in the middle of the southern edge of the survey area. The results of the terracotta figurine distribution from the survey (Figure 4.9a) are limited to a total sample of 10 figurines. Their occurrence is in close association with the islands of ceramic body sherds. The figurines are both human and animal, with easily recognizable bull and elephant forms.

4.7 CONCLUSION

The resultant non-intrusive surface surveys at the Bala Hisar of Charsadda has allowed us to link the locations of our own field activities with those of Wheeler and Marshall before him. In addition, collectively, they have allowed us to map the unacceptably high destruction of in-situ archaeological deposits at the Bala Hisar as a result of archaeological trenches cutting down the face of the site. On a more positive note, however, the high resolution mapping of the site will provide an extremely valuable resource for those tasked with preserving the mound and monitoring its deterioration. Individually, the earth resistance survey was able to identify some of Wheeler's excavation trenches but the defensive ditch on the eastern side of the Bala Hisar was only visible as an extremely faint anomaly. Indeed, it would not have been identified, were the excavation trenches not seen. The magnetometer data are governed by strongly varying anomalies, which seem to mask all subtle changes that might be caused by the archaeological features. The area hence seems to be unsuitable for conventional archaeological geophysical investigations. However, in the future, it may be possible to employ electromagnetic techniques for the investigation, especially of the ditch. Both low frequency EM as

well as GPR may yield useful results. Finally, the surface survey of the area between the Bala Hisar and the eastern mounds is in all probability related to some of the earlier occupation levels at the site, dating up to the 3rd century BC. This interpretation is based on the correlation between Wheeler's statement of the introduction of cobbles and baked brick as building materials and their occurrence in the lower elevations of the site. However, as a result of the natural and human activity on the site the survey transects at both the western and eastern edges of the survey area represent a diverse mix of material that has eroded from the face of the mounds. These summaries relate well to those from the intrusive investigations of the sites as discussed in Chapters 5 and 6, concluding that archaeological levels still in situ at the Bala Hisar frequently lie below between one and 3m of extremely mixed redeposited collapse.

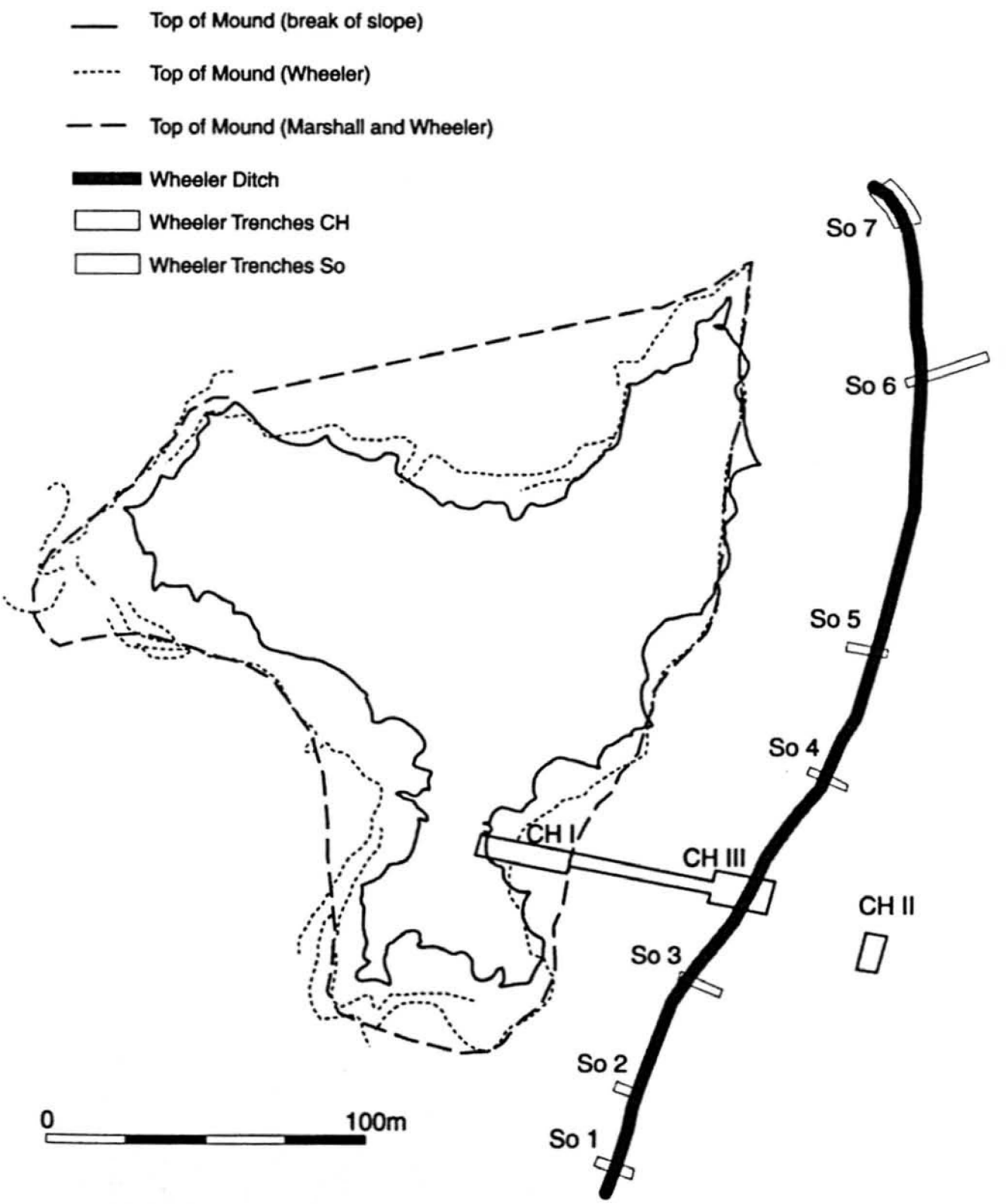


Figure 4.1: Erosion of the Bala Hisar of Charsadda since 1903

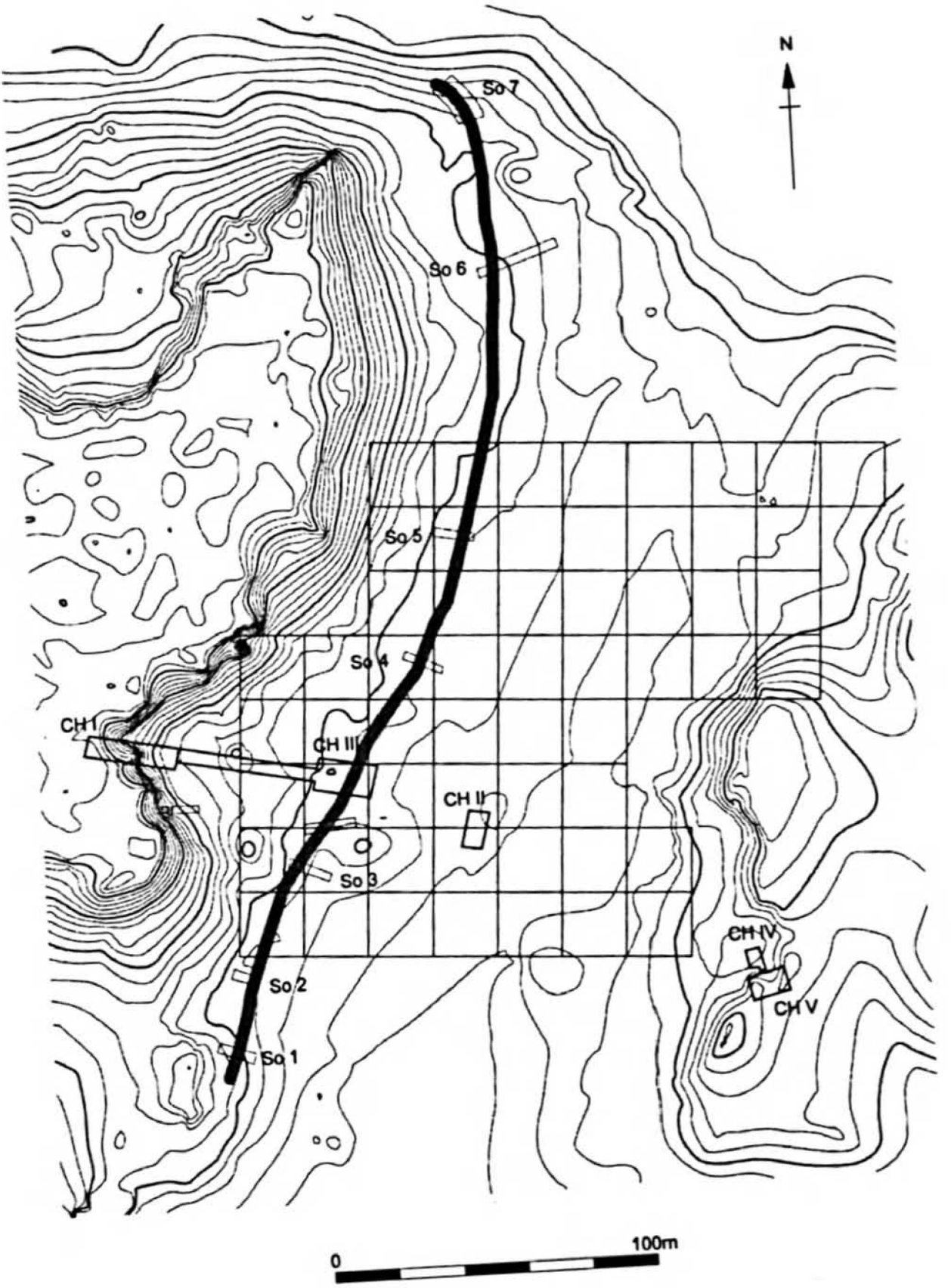


Figure 4.2: Location of the survey area between the Bala Hisar and the eastern mounds (grids measure 20 x 20m)

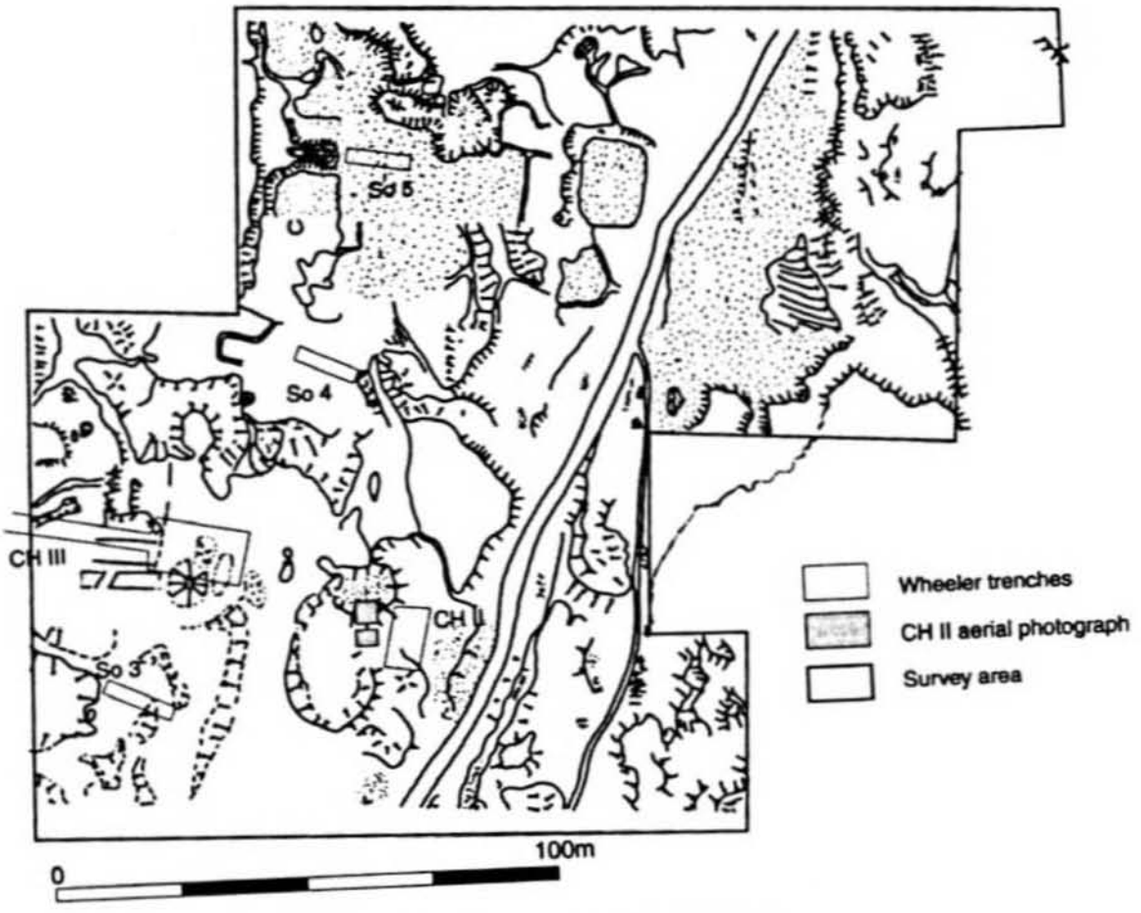


Figure 4.3: Hachure plot of the earthwork survey

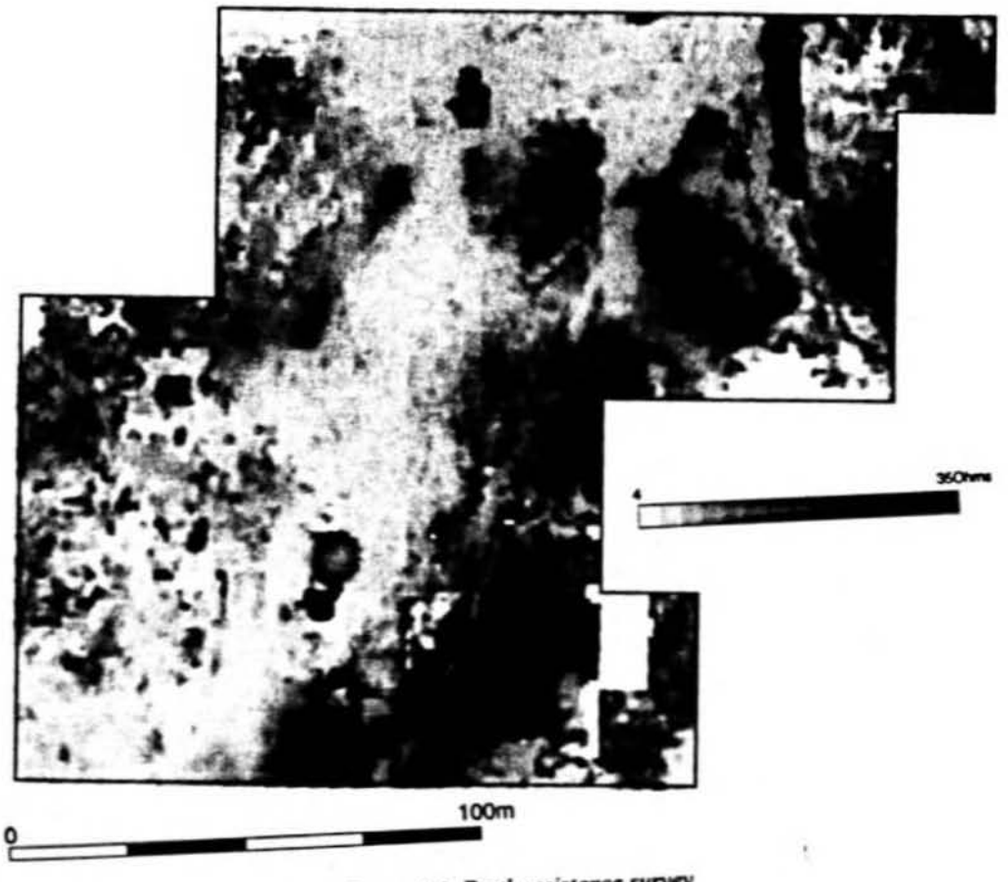


Figure 4.4: Earth resistance survey

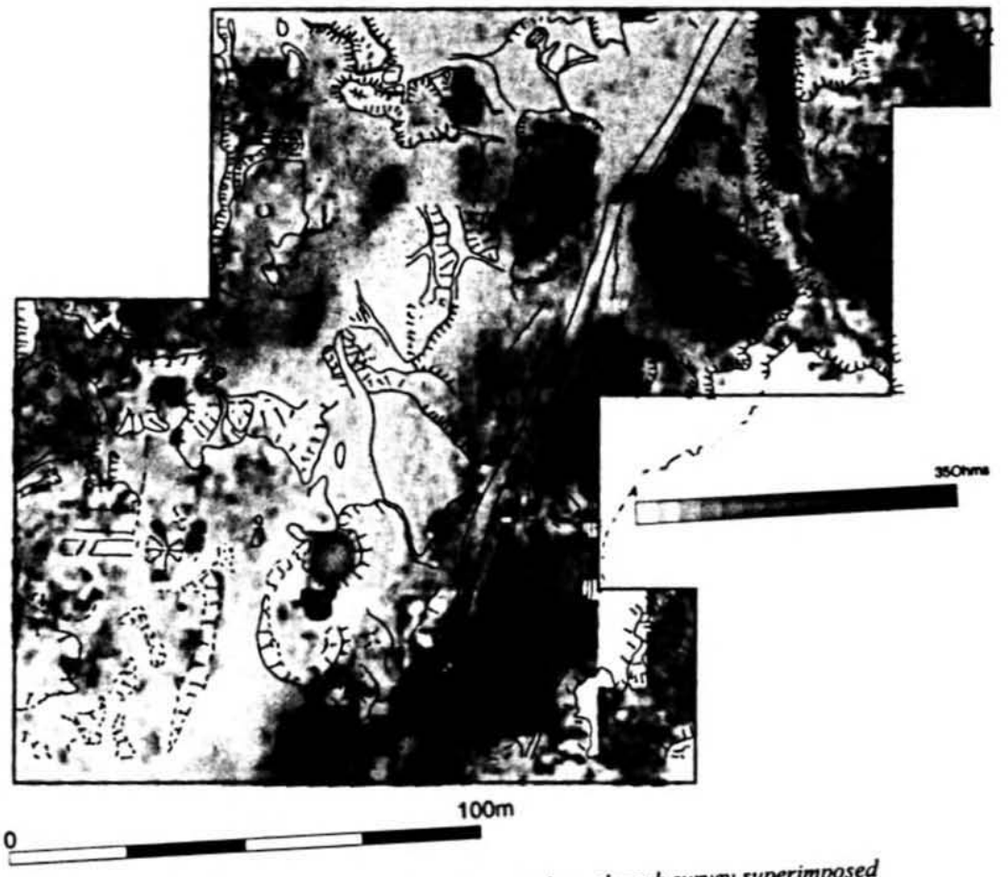


Figure 4.5: Earth resistance survey with earthwork survey superimposed

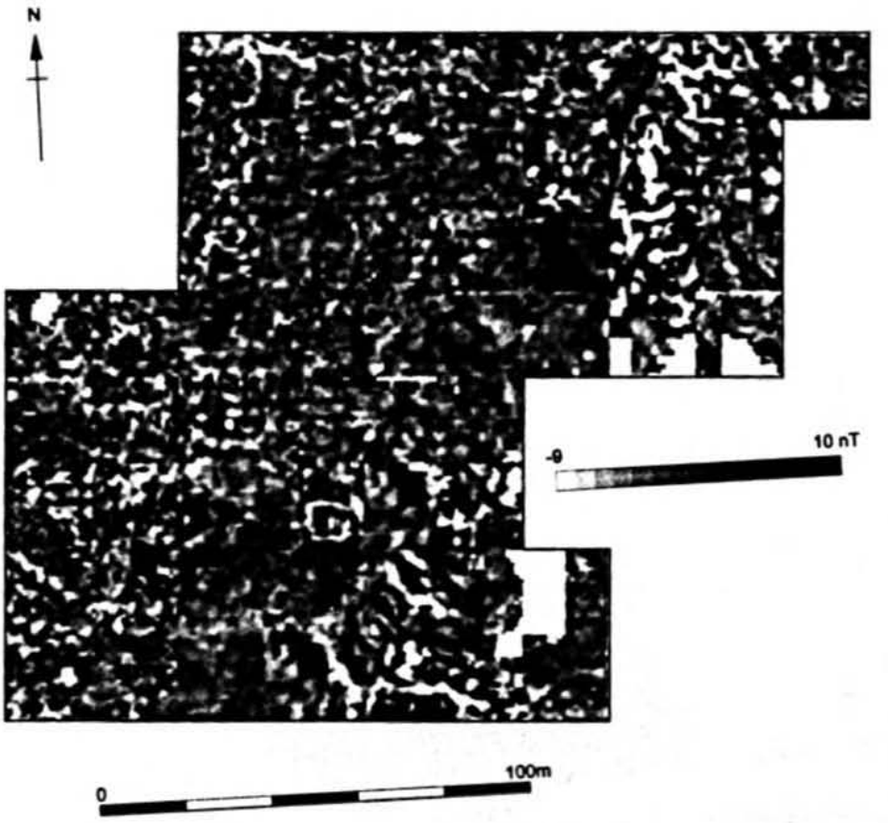


Figure 4.6: Fluxgate gradiometer survey

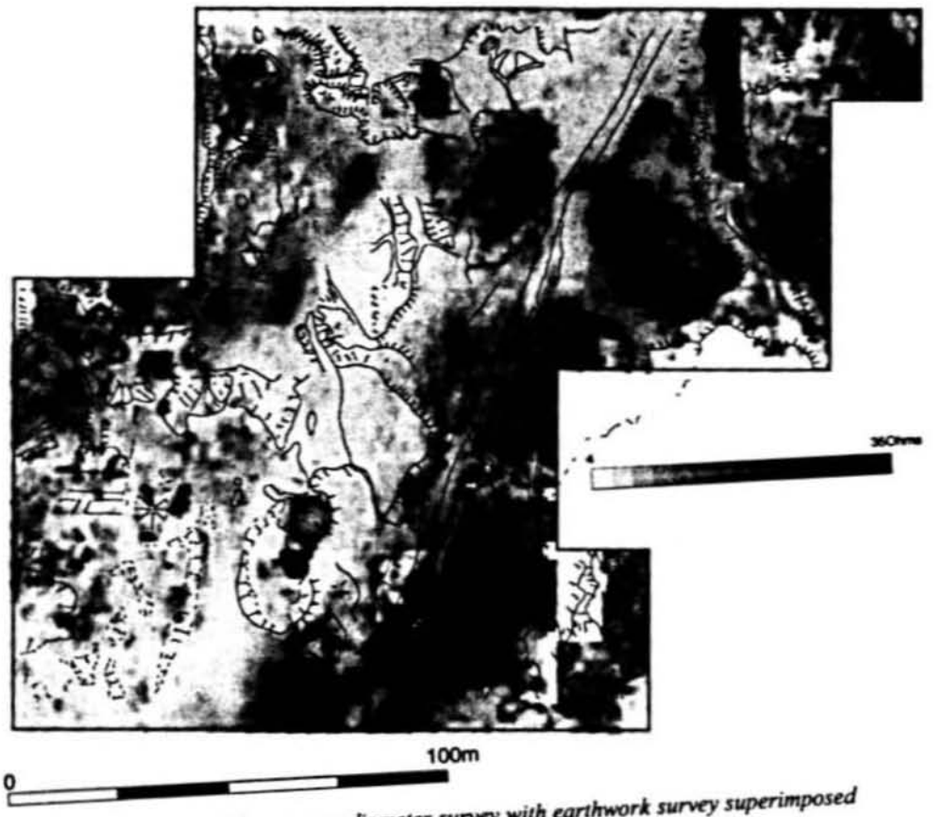


Figure 4.7: Fluxgate gradiometer survey with earthwork survey superimposed

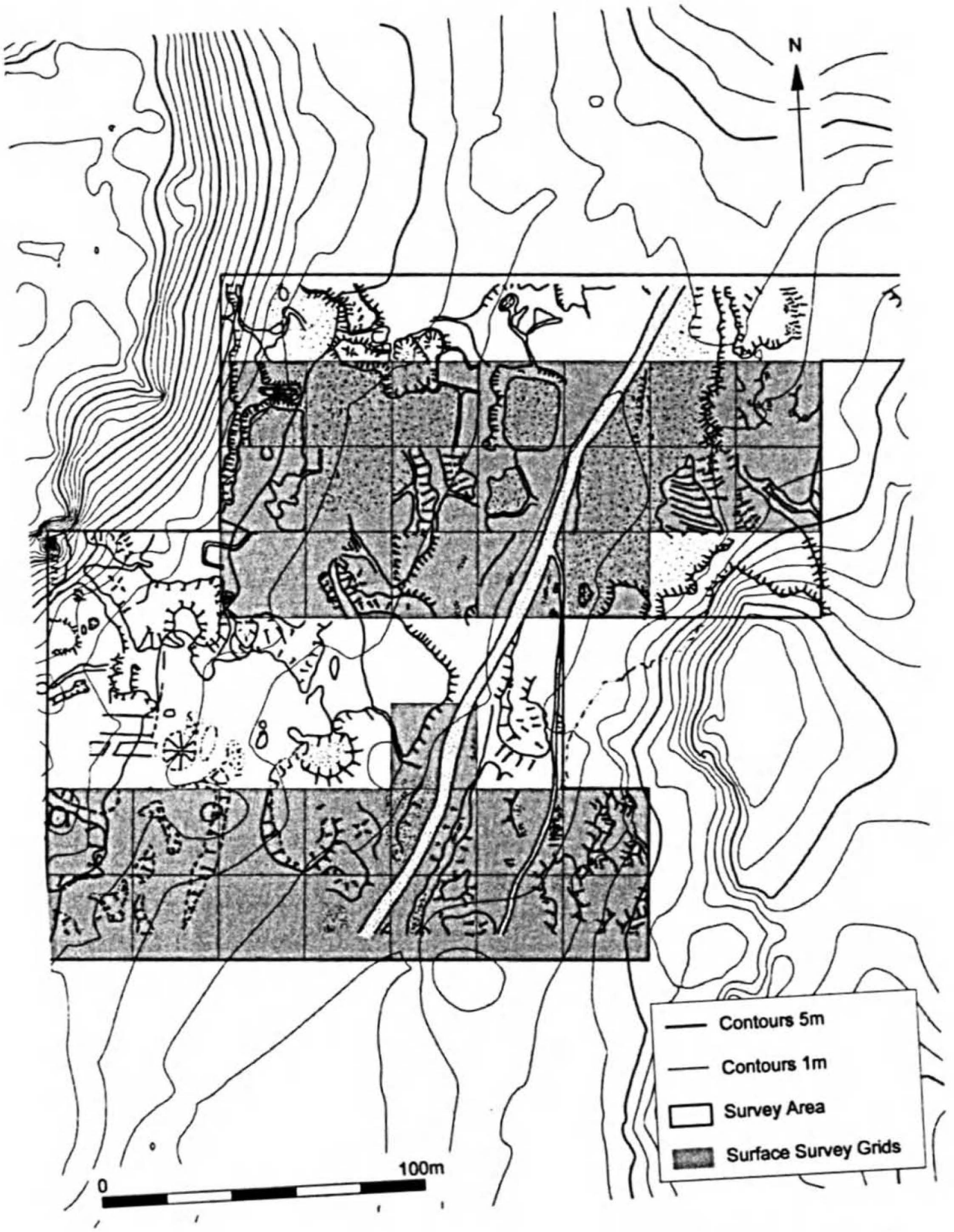


Figure 4.8: Shaded squares showing the location of surface collection transects and the road within the survey area

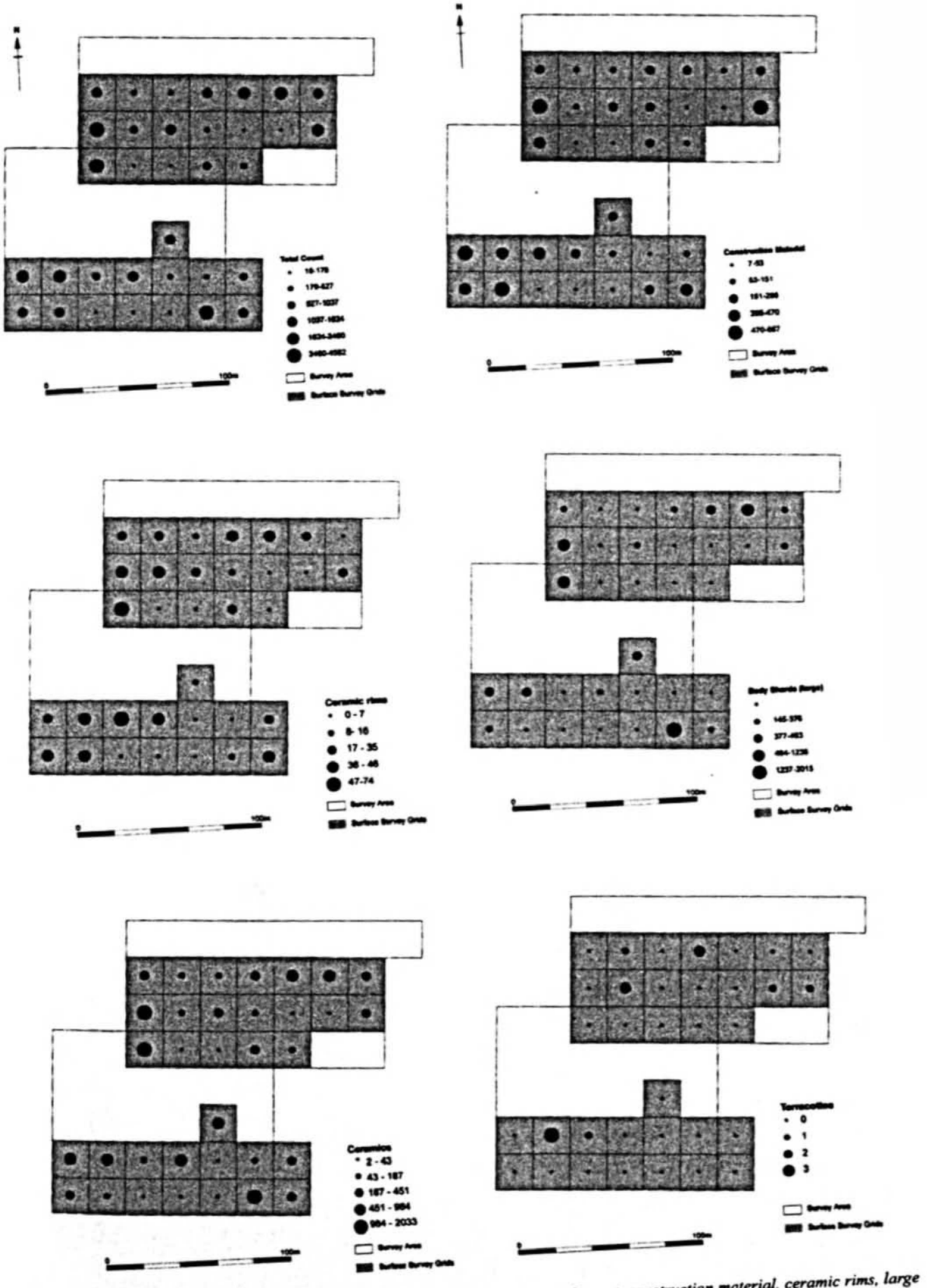


Figure 4.9a: Representation of finds distribution within the surface survey: total count, construction material, ceramic rims, large body sherds, total ceramics and terracotta finds

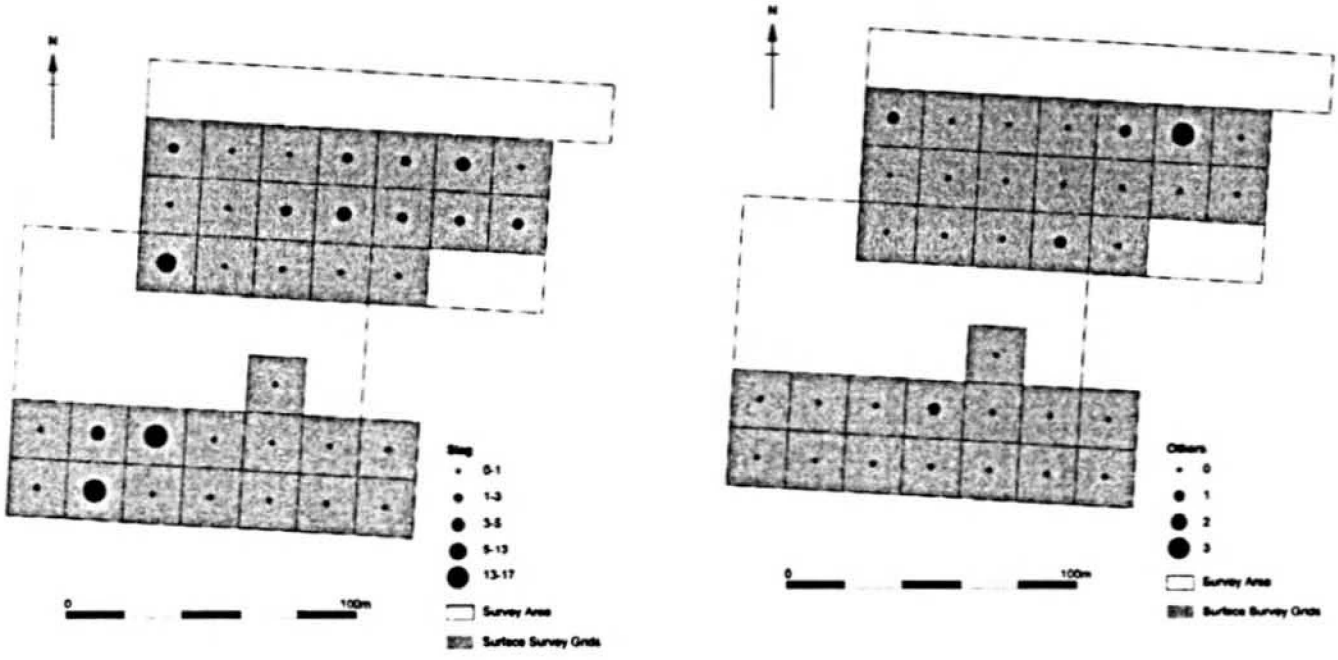


Figure 4.9b: Representation of finds distribution within the surface survey: slag and other finds

Plate 4.1: View of RM15 survey between the Bala Hisar and the eastern mounds

CHAPTER 5

THE FORTIFICATIONS

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5.1 INTRODUCTION

As noted in Chapter 3, Garrick, Marshall and Wheeler had all discussed the fortifications of the Bala Hisar of Charsadda. Garrick and Marshall, for example, both recorded the presence of badly damaged brick and stone walls and bastions high up in the exposed sections of the Bala Hisar. Although Garrick's brick walling was attributed to the Mediaeval period (1882: 105), Marshall suggested a date of the Kushan period for the fortifications of 'regular diaper patterned masonry' encountered on the summit of the mound (1904: 148) (Figure 5.1). Both of these identifications were questioned by Sir Mortimer Wheeler (1962: 7), who then concentrated all his discussions on the fortifications exposed by his own trench, Ch. III. Indeed, Wheeler based much of his chronological framework for the site on the identification of trench Ch. III's V-profile ditch as the fortifications of the Achaemenid Satrap Astes' city and its siege by the army of Alexander the Great in 327 BC (Wheeler 1962: 28) (Figure 5.2). In Chapter 1, we identified the main aim of our project as the study the nature of the origins and development of the early sequence of the Bala Hisar of Charsadda, rather than providing absolute dating for the entire length of Wheeler's sequence. As a result, we concentrated on identifying specific problems and issues associated with the chronology and stratigraphy of the mound and focused our field operations in order to solve them. Logically, a number of these related to the site's fortifications, in particular to the following themes: what was the course of the ditch exposed by Wheeler; how secure was the Alexandrian date for the ditch; what was the relation of the postern gate to the ditch (Figure 5.3); what was the nature of the ditch fill; and what was the relation between the ditch and the wall foundation trench behind it? In order to resolve these themes and test Sir Mortimer Wheeler's allocation of a date of 327 BC to the V-profile feature, we decided to re-excavate trench Ch. III as well as cutting a fresh trench (Ch. VI) across the ditch 8m to the south of Ch. III (Figure 5.4). Furthermore, as we had also identified the presence of a large retaining wall in the upper part of the mound's section, we cleaned a section (Ch. VII) in order to understand more fully the phasing of fortifications of the Bala Hisar of Charsadda (Figure 1.1). Context details are contained in Appendix A.

5.2 TRENCH CH. III

The western edge of Wheeler's old trench, Ch. III, was still partially exposed when we first visited the site in 1993 and we decided to reopen it. By reopening trench Ch. III we hoped to reinvestigate the relationship between postern bridge and the V-profile ditch as well as investigate the nature of the ditch fills. As with the other trenches at the Bala Hisar of Charsadda, all the upper levels of the site have been extremely badly damaged by robber pits, leaving archaeological features still in situ as isolated cuts within the natural clay mound. This was certainly found to be the case in the vicinity of trench Ch. III, all the more so as Wheeler had already excavated in the area in 1958 and we had no way of knowing whether subsequent erosion had further damaged the archaeology remaining in situ. It is also important to note that chronologically speaking, trench Ch. III was the most important trench to be re-examined as it had provided Sir Mortimer Wheeler with a direct link between the site and the historical character of Alexander the Great (Wheeler 1962: 13). When we opened up the old trench we clearly hoped to be able to test this assumption of Wheeler's and our exposure of trench Ch. III differed only slightly in size and orientation from that of Wheeler's in order to ensure that we were free of modern contamination. Only three phases of activities were identified in the vicinity of trench Ch. III: Phase 3.A represented the construction of a ditch and post structure; Phase 3.B the robbing of its contexts; and Phase 3.C more recent deposition.

5.2.1 Phase 3.A

As noted in Section 2.2, auger coring has revealed the presence of a large natural mound of clay sitting directly below the artificial tell of the Bala Hisar of Charsadda (Figure 5.5) (Plate 5.1). Trench Ch. III is positioned towards the edge of the natural clay mound (context 3), which in turn sits above a very fine grey alluvial silt (context 1099). Into this natural clay was cut a sharp V-shaped profile ditch (context 2) running in a southerly direction along the edge of the natural mound (Plate 5.2). Measuring 3.6m wide and 2.1m deep, it soon became clear that our own, newly recut section was narrower than that illustrated by Wheeler (Wheeler 1962: Figure 6), 3.75m as opposed to 4.87m wide (Figure 5.6). This inconsistency appears to have been due to the sighting of Wheeler's original section at 15° and not at 90° to the course of the ditch. It is also clear from Sir Mortimer Wheeler's plan that the southern end of the ditch is curving steadily towards the west, further accentuating the section's width. Wheeler had also suggested that the lower fills of the ditch consisted of a thin primary fill of grey alluvial sand covered with a thick deposit of clay, which was devoid of pottery (ibid.: 27). These factors, combined with the absence of the remains of an earthen rampart behind the

ditch, led Wheeler to hypothesise that the ditch had been deliberately filled with its own rampart almost immediately after its construction (ibid.: 18). For Wheeler, this hypothesis correlated perfectly with the classical descriptions of the slighting of the defences by the victorious Macedonians after the siege (ibid.: 34). Although our recut section appears to be similar in outline to the original 1958 section, there are two notable differences. Firstly, it is clear that the grey alluvial sand at the base of the ditch is not a basal fill but the top of natural layer 1099, which underlies the entire mound. Secondly, it is clear that the clay fill of the ditch was not the result of a single filling activity soon after the digging of the ditch. Indeed, we found it possible to separate the clay fill into 24 individual lenses consisting of alternate bands of sandy and silty deposits (contexts 34, 33, 32, 31, 30, 29, 28, 27, 48, 26, 25, 24, 23, 22, 21, 20, 19, 18, 17, 47, 16, 15, 12 and 11) (Plate 5.3). These lenses also contained fragments of bone, charcoal, pottery and brick, suggesting a gradual silting up of the ditch aided by the nearby disposal of domestic rubbish. Due to the exposed nature of this eroded trench, we decided not to radiocarbon date material from the ditch fills, relying instead on samples GrA-5247 and GrA-5250 from trench Ch. VI, a continuation of the ditch cut (context 55), both of which dated to the middle of the first millennium BC.

The second feature present in this phase, although its precise stratigraphic relationship is not clear, was the posthole complex, identified by Wheeler as the palisade and bridge of a postern gate in 1958 (Wheeler 1962: 27). Wheeler's evidence for this structure was in the form of two parallel lines of postholes, 1.8m apart, running at a right angle the ditch. It was also noted that the postholes were 0.30m in diameter and between 0.30m and 0.45m deep (ibid.). Although Wheeler's publication does not record the total number of postholes found, it is clear from his plan that there were 35 in total (ibid.: Figure 6). We successfully located the majority of the postholes even though there had been some erosion on the western side of the ditch, undoubtedly caused because the trench had not been backfilled. However, it also became evident that even though some of the original postholes had been destroyed by erosion, there were many more postholes than the 35 indicated on Wheeler's plan, 55 in total (Figure 5.4) (Plates 5.4 & 5.5). The new postholes, in combination with the old ones, form a rather different orientation from that recorded on Wheeler's plan and they appear to cross the ditch and apparently turn a right angle along the eastern edge of the ditch. It is clear that this orientation could equally be interpreted as part of a right angle corner of a rectangular structure. Certainly the presence of a line of postholes along the eastern, and presumably outside, edge of the ditch cannot be explained in terms of military architecture. There is also, unfortunately, no obvious stratigraphic relationship between the postholes and the ditch because Wheeler had excavated it all. For example, postholes cutting into the ditch fill would suggest that the posthole structure was a later feature, whilst the complete absence of postholes within that fill might suggest that the ditch had actually been cut straight through the lines of postholes. As a result, we are left with the choice of one of three possible interpretations or scenarios. Firstly, that the ditch and posthole structure are of a contemporary nature; secondly, that the ditch was cut across an earlier posthole structure; or thirdly, that the ditch was filled and that fill was later cut by an alignment of postholes. A bone (GrA-4219) was recovered from the fill (context 39) of one of the newly identified postholes (context 139) and dated to the middle of the first millennium BC, although it is more fully discussed in Chapter 7.

5.2.2 Phase 3.B

In parallel with many of the sequences in our trenches at the Bala Hisar of Charsadda, trench Ch. III had very clear evidence of robber pits in its uppermost levels. The final in-situ fill of ditch cut 2, lense 11, was cut by pit 9 and filled with rubble-rich sandy silt 10.

5.2.3 Phase 3.C

Whilst old land surface context 1 represented the backfill of Wheeler's old trench, it had been cut in 1993 by one of our auger cores (13) and refilled with wash 14. This modern example of intrusion was perfectly preserved within the section of the trench!

5.3 TRENCH CH. VI

As noted above, trench Ch. VI was located 8m to the south of Wheeler's trench Ch. III (Plate 5.6). Measuring 16m by 3m, it was designed to investigate the course of Wheeler's defensive ditch, its date and the relationship between the ditch and the wall behind it. In order to place our trench directly over the ditch, we estimated its course from the plan within Wheeler's Charsadda monograph (1962: 11) but failed to locate it. We had to extend the trench a further 5m to the west before we managed to locate the ditch edges. From the alignments between Ch. III and Ch. VI it appears that the ditch curves significantly to the west and, in so doing, narrows (Figure 5.4). This is in contrast to the published alignments in Wheeler's report (Wheeler, 1958,11) and we believe that this contrast is due to the presence of a number of ditch-like features cut into the peripheries of the natural clay mound, which forms the core of the Bala Hisar. For example, we identified part of what appears to have been the badly disturbed remains of a substantial cut feature (context 61) at the eastern end of Ch. VI. Measuring over 3m in width and cut some 2m deep into the natural clay surface, it may represent the remains of another, earlier phase of defences (Figure 5.7). It is possible, therefore, to suggest that some of Wheeler's sondages, hastily dug in bad conditions (ibid., 27), revealed the sections of earlier ditch-like features rather than the same defensive ditch identified in trench Ch. III. Indeed, this phenomenon is certainly found in trench Ch. VI, where the two major cut features (55 & 61) have provided quite different radiocarbon dates. The sequence of trench Ch. VI consisted of five major phases of deposition 6.A–6.E, of which A to C represent in-situ levels and although the results of the radiocarbon samples are identified below, fuller discussion of the absolute and relative dating will be found in Chapter 7.

5.3.1 Phase 6.A

The natural soil (context 56) at the bottom of trench Ch. VI is part of the low mound of clay, which underlies the entire archaeological mound. The natural contour of the mound is also visible as it decreases in height from west to east, dropping 1.25m in a distance of 16m. Using a combination of

radiocarbon measurements and stratigraphic relationships, it is possible to suggest that during this first occupation phase in the vicinity of trench Ch. VI, a feature was cut at the eastern edge of trench Ch. VI. This cut (context 61) appears to have formed part of a N–S ditch (Plate 5.7) or possibly a large pit. It measured 0.8m in depth and at least 2.75m in width and was cut into natural clay 56. Its basal fill (context 60=62) was a silty sand, sealed by secondary fill 57, another layer of silty sand. A single radiocarbon sample (GrA-5246) from context 60 has yielded a date of c. 1270–930 BC and is discussed fully in Chapter 7.

5.3.2 Phase 6.B

A similarly early radiocarbon date (GrA-4210) of between c. 1260–900 BC, has also been recovered from mudbrick wall 147. This was the second feature to have been created in the vicinity of trench Ch. VI and consisted of a layer of compact unbaked brick slab fragments (147), lying within 1.6m wide and 0.05m deep wall trench 174 and surrounded by wall melt 71=63 (Plate 5.8). The brick wall measured 1.6m wide and 0.10m deep, whilst its overlying melts were as thick as 0.65m deep. As noted in Chapter 7, the artefact assemblage recovered from the wall melt (context 71=63) is quite mixed suggesting that the dated bone may have been residual from the trench's earlier phase of occupation and that the feature was more likely to have been cut in the first quarter of the first millennium BC.

5.3.3 Phase 6.C

During Phase 6.C, a further feature was cut between trench 61 and wall foundation 174, destroying the stratigraphic relationship between the two earlier features. This new feature (context 55) was another ditch cutting the eastern edge of wall 147 and its associated melts. It measured 4.25m wide and 2m deep (Plate 5.9). It is also apparent that both features, the wall and the ditch, followed slightly different alignments as the latter appears to truncate the line of the former. Ditch cut 55 was filled by a series of seven layers 80, 79, 78, 73, 72, 67 and 66. Basal fill 80 consisted of a 0.30m thick compact silty clay with ceramic and bone fragments and was followed by 0.15m thick silty clay 79. Layer 79 was in turn sealed by silts 78, 72 and clay 67. The final layer (context 66) consisted of a 0.55m thick band of clay. This feature appears to be the continuation of ditch cut 2, Wheeler's 'Alexandrian ditch', but its two radiocarbon samples, GrA-5237 from context 73 and GrA-5250 from 80, both provided dates of the middle of the first millennium BC, similar to that from Phase 3.A of trench Ch. III. For ease of comparison with our new perpendicular section of the ditch in Ch. III, we also prepared a perpendicular section of ditch cut 55 (Figure 5.8).

5.3.4 Phase 6.D

These three earlier phases of occupation and deposition were then subject to a substantial amount of robbing from the surface, stripping all in-situ material from above and leaving them as three largely isolated features cut into the clay natural. The in-situ fills of ditch 61 were damaged on their eastern edge by robber pit 68, which measured 4m wide and 0.9m deep. Filled with silty clays 45, and 43=44, it was then cut by pit 53. Robber pit 53, measuring over 1.52m in width and 0.8m deep, was in turn filled with context 42, a large collection of river cobbles within a matrix of sandy silt. This feature was then sealed by context 35=40=41, a 0.5m thick layer of sandy silt with many minor lenses, representing collapse from the mound above. This collapse was then cut by two robber pits, 49 and 51. Pit 49 measured 2.5m long and 0.3m deep and was filled with sandy silt 64. Pit 51, a very sharp linear feature running NE–SW, measured 0.5m deep, 2.6m long and 2.15m wide and was filled by sandy silts 52 and 46.

At the western edge of the trench, in-situ features were similarly damaged by robber pits damaging the stratigraphic relationships between ditch cut 55 and wall cut 174. The first of these was pit 59, whose base measured over 7m E–W and was filled with sandy silt 39=54=58. The in-situ fills were also damaged by pit 65, which measured at least 4m long and 0.7m deep and was filled with sandy silt 64. The fills of robber pit 59 were in turn damaged by pit 70, which was located at the western end of the trench. Measuring at least 1.8m in diameter and 1m in depth, it was filled with sandy silt matrix 69 and fired brick, ceramic sherds, river cobbles. Pit 65 was also cut during this time into wall melt 63, and filled with 64. These intrusive features and their fills were covered by 0.3m thick sandy silt 38, an erosion wash. The final feature was robber pit 50, measuring 1.9m long, 0.2m wide and 20m deep, which was filled with fired brick and cobbles with the sandy silt matrix of context 37.

5.3.5 Phase 6.E

This phase is associated with the cessation of robbing activities and the deposition of two layers of erosion washes. The first, context 7, was a 0.4m thick layer of silty clay, cut by a 3m wide and 0.3m deep erosion gully (8) at the western edge of the trench. Gully 8 was then filled by sandy silt 6 and both sealed by context 5, a mixture of sherds, bricks and pebbles within a matrix of silty clay. The deposition of 5 was the final stratigraphic activity in the vicinity of the trench until our excavation took place and context 4 represents the cleaning of trench Ch. VI, prior to excavation.

5.4 TRENCH CH. VII

As noted in Section 5.1, one of the tasks of our first season of excavation was to test Sir Mortimer Wheeler's assumption that there was no evidence of later walling or fortifications around the Bala Hisar. Indeed, Wheeler had dismissed the earlier sightings of Garrick and Marshall, stating that they 'seem to have been ready to mistake spoil heaps and deep pebble footings of interior mudbrick buildings in the crumbling faces of the mound for fortifications' (1962: 7). Furthermore, it is clear from Wheeler's descriptions of trench Ch. I, that he interpreted the mound as a tell, created by series of mudbrick or cobble structures being built one on top of another. With such an interpretation there was no need for an additional revetment or wall around the mound. Wheeler, a trained military practitioner, showed great interest in the early defensive circuit surrounding the mound, however, he made no further comment as to the pre-Alexandrian or post-Alexandrian defences of the city. Implicitly, Wheeler was suggesting that through its entire occupation (c. 530 BC–4th century AD), it was only fortified in 327 BC. In order to test this assumption, we conducted an exploration of the edges of the mound during

our first field season in 1994 to see if subsequent erosion had revealed residual stone or brick walling that might suggest the present of facing or revetment. As there was no evidence of walling, apart from low foundations of cobbles or brick at various different levels, we were tempted to confirm Wheeler's hypothesis that the walls identified in 1881 and 1903 were merely eroding fragments of series of domestic structures within the tell. When we again conducted an exploration of the edges of the mound after heavy rainfall, however, we were surprised to find the exposed section of a wall, measuring at least 10m wide and 8m high, in a large erosion gully on the eastern side of the mound at a depth of 6m below the summit's surface at locality Ch. VII (Figure 5.9).

5.4.1 Phase 7.A

The wall was constructed of large unbaked mudbricks set in a mud mortar (context 999) (Plate 5.10). As at first there was some concern as to whether this structure was of single or multiple phases, we carefully cleaned the bricks and confirmed that they appeared to be consistent with a single phase of construction. It also became clear that, although the structure had been constructed in a single phase, it had been done so over an uneven surface with some portions of the lowest courses of the wall standing as many as eight or nine courses lower than others. Unfortunately, we were unable to observe a foundation cut for this wall. We drew the elevation of the wall in relation to the topography of the mound in order to start some preliminary discussion of its probable date and function. The wall appears to run through the gully in a N–S alignment parallel with the edge of the mound. Such an alignment would be consistent with the hypothesis that it is a revetment or terracing structure. It was impossible to follow the alignment further as it is still buried under a talus of eroded material to the north of the gully and has been completely destroyed by erosion and farmers to the south. We originally expected to correlate the date of the wall, built when the mound was already 12m high, with a date of c. 300 AD tentatively using relative levels from Wheeler's own Ch. I section. A carbon sample (GrN-21831) was recovered from directly above the wall (context 998), providing a very useful *terminus ante quem* of 80–220 AD for its construction. Finally, it should be noted that an additional wall of unbaked mudbrick, measuring at least 2.25m wide, was identified in trench Ch. VIII/IX in the final levels of site period II.D. As it appeared to run N–S along the western face of the mound, it may also represent a revetment or terrace wall but the areas to the north and south were too eroded to further pursue this question. Representing a much earlier phase than Phase 7.A, the dating of this Phase 8.D structure is further discussed in Chapter 7.

5.5 CONCLUSION

At the beginning of this chapter, a number of issues concerning the dating and nature of the fortifications at the Bala Hisar were raised. These were the dating of Sir Mortimer Wheeler's Alexandrian ditch, the course of the ditch, the date of the palisade, the date of the wall and the relationship between each of these features. Moreover, we also wished to test the assumption that the site was only fortified during one stage of its long occupation. We have been unable to fully stratigraphically confirm a number of these relationships due to the very badly disturbed nature of the upper levels of the site. The undermining of the site and removal of soil has resulted in the in-situ archaeology being restricted to a series of isolated features cut close to the eastern edge of the natural clay mound itself. The exact nature of these features is not always clear because they have been disturbed by subsequent robbing but it is apparent that these features appear to run parallel to the edge of the mound and may have served the purpose of defining the eastern edge of the settlement. This is certainly true for ditch cut 2=55 and wall trench 174, and probably true for ditch cut 61. The periodisation of these features has been enhanced through the use of radiocarbon dates from the various fills as well as a detailed examination of the artefacts recovered from each trenches. Indeed, we have now identified four main phases of structural activities fortifying or defining the edges of the Bala Hisar and discuss their absolute chronology and periodisation in detail in Chapter 7. The earliest phases of this activity are located within the vicinity of trench VI and are represented, firstly, by the cutting of a ditch-like feature (61) between c. 1270–930 BC and, secondly, the cutting of wall foundation (174) in c. the first quarter of the first millennium BC. Sir Mortimer Wheeler's 'Alexandrian ditch', V-profile cut 2=55, represents a third phase of activities and may be part of the same defensive complex as the post-hole structure in trench Ch. III, although the exact stratigraphic relationship was excavated out in 1958. It is noteworthy that its radiocarbon measurements suggest a date of the middle of the first millennium BC rather than the expected date of the 320s BC. The fourth phase is represented by the construction of a large retaining wall high in the mound in the vicinity of trench Ch. VII between c. 80 and 220 AD.

There may have been earlier and later phases of fortifications or revetments which have been removed by decades of soil robbing and erosion. For example, we identified a large mudbrick wall (context 1096) at the very western edge of trench Ch.VIII (Figure 5.3). Cut into N–S foundation trench 1103 and set in mud mortar, it measured 2.25m wide and survived to a height of 0.5m. As discussed in Section 5.5, it is likely to have represented a major revetment or terrace securing the stability of structures built on the uneven edges of the artificial tell. Finally, returning to the structures identified by Garrick and Marshall, both scholars may have been correct. Marshall's massive diaper masonry wall (1904: 149) probably represents a late phase of retaining wall ensuring the stability of the Buddhist monuments crowning the mound and Garrick's report of vestiges of brick walling (1882: 105) suggests that medieval occupiers of the Bala Hisar faced the mound in kiln-fired bricks in order to prevent erosion and subsidence damage the palace and garrison complex on the summit. This is precisely the technique used at the Bala Hisar of Peshawar with great bastions and ramparts of cultural and natural soil faced with kiln-fired brick and we should accept Garrick's suggestion that the Bala Hisar of Charsadda was slighted and abandoned to the ravages of farmers when the Bala Hisar of Peshawar was built in 1882. Having thus described the stratigraphic sequences of the fortifications, the next chapter will discuss the evidence from the site's habitation levels.

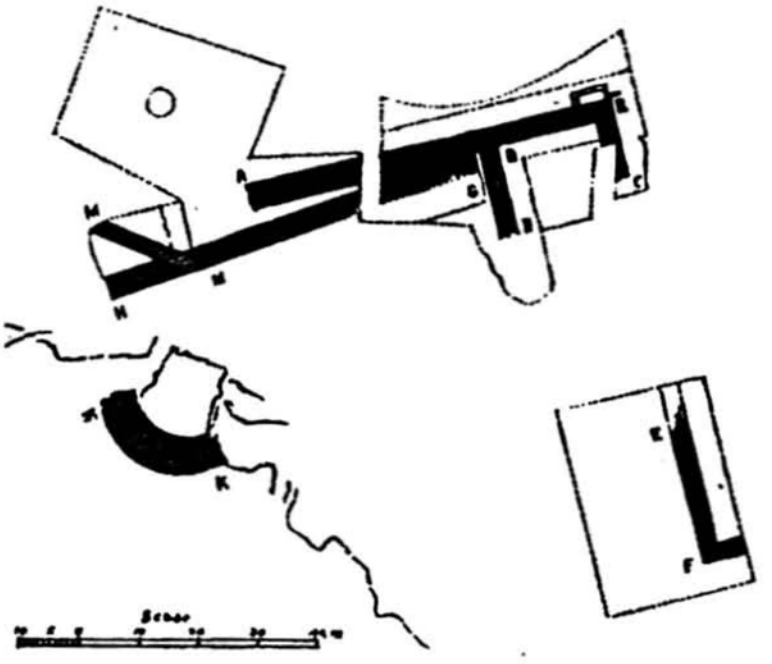


Figure 5.1: Marshall's plan of Kushan fortifications on the summit of the Bala Hisar

Figure 5.2: Wheeler's section through the defensive ditch of trench Ch. IIII

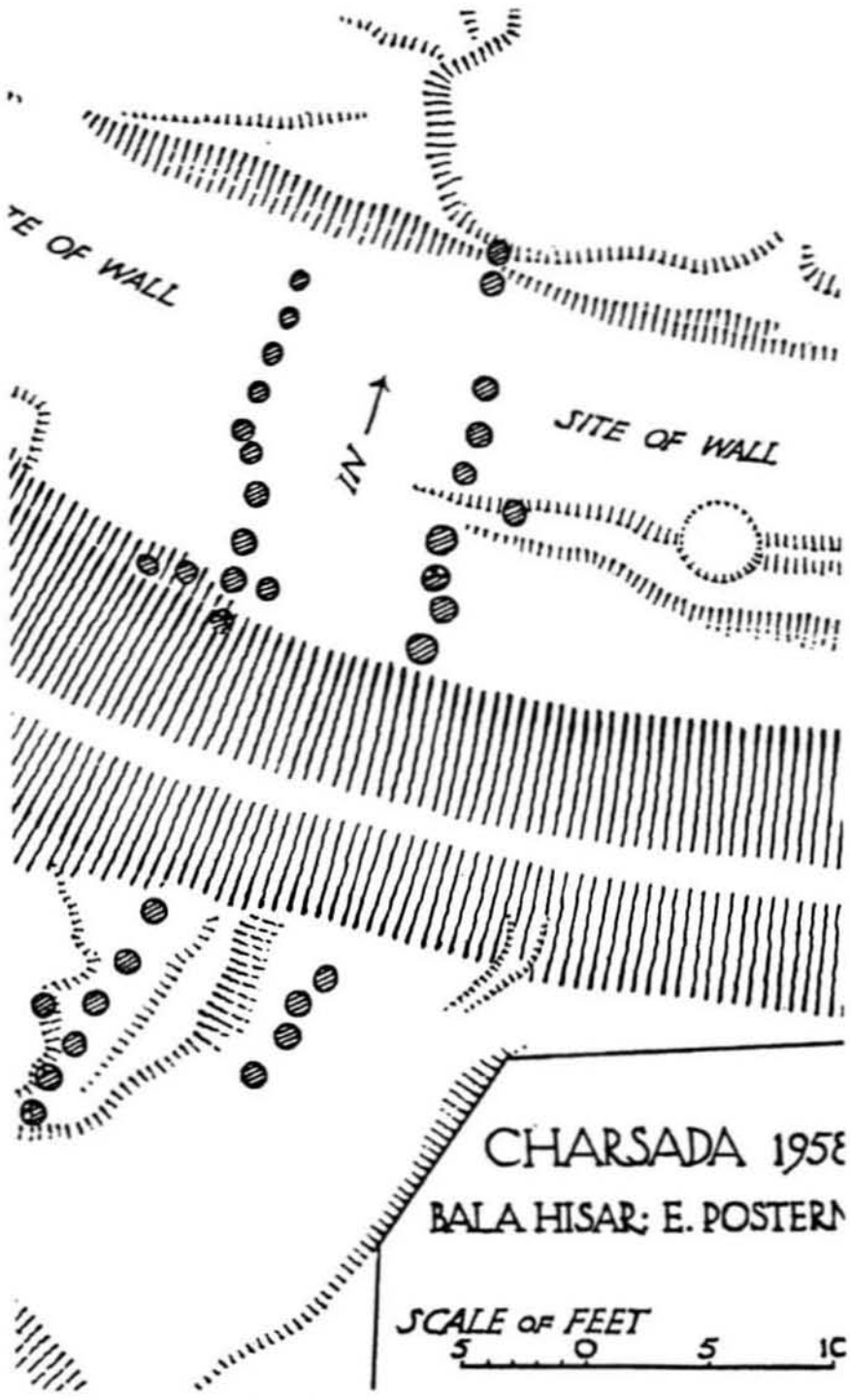


Figure 5.3: Wheeler's plan of the postern gate complex in trench Ch. III

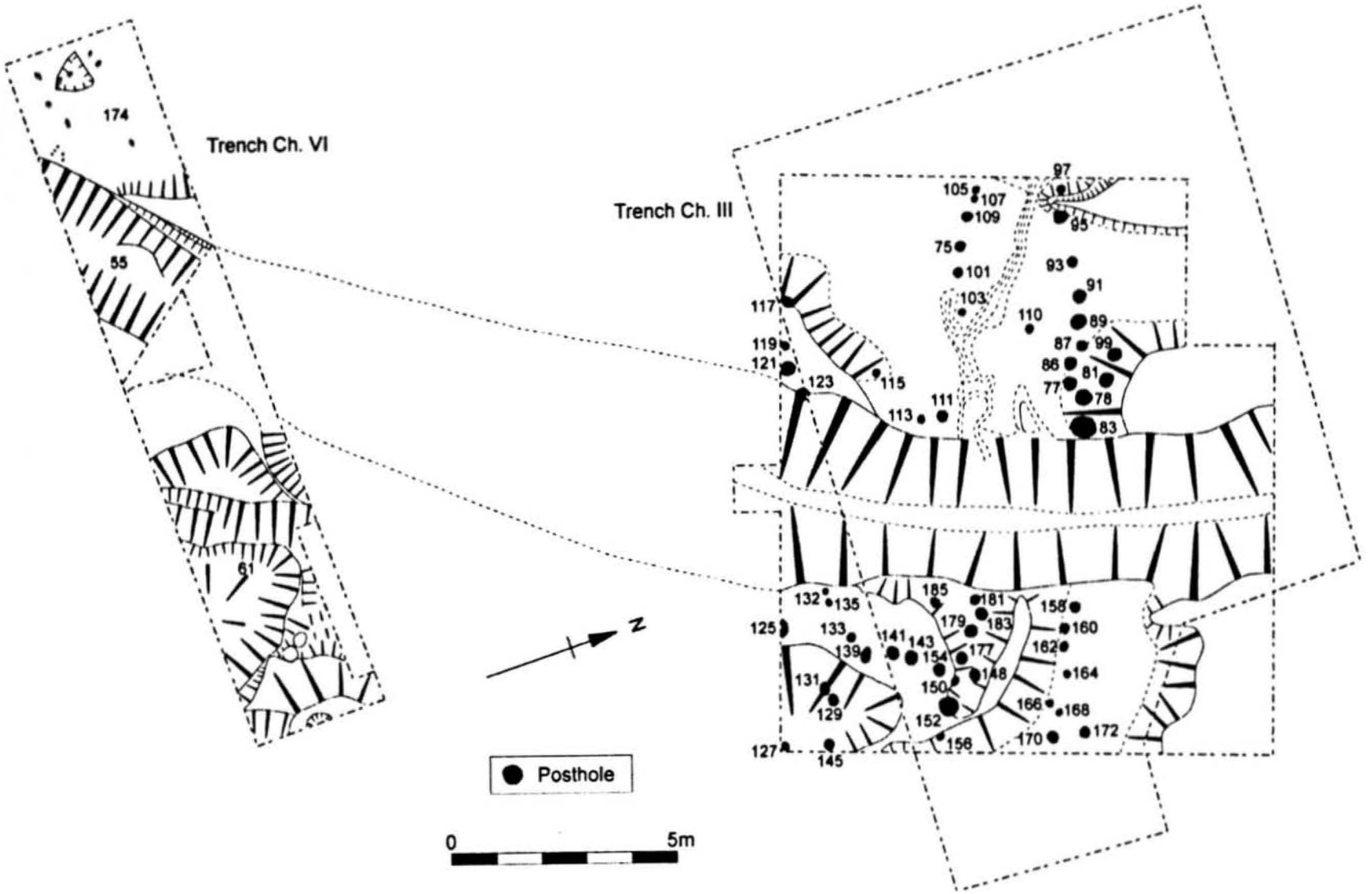


Figure 5.4: Plan showing the locations of trenches Ch. III & VI

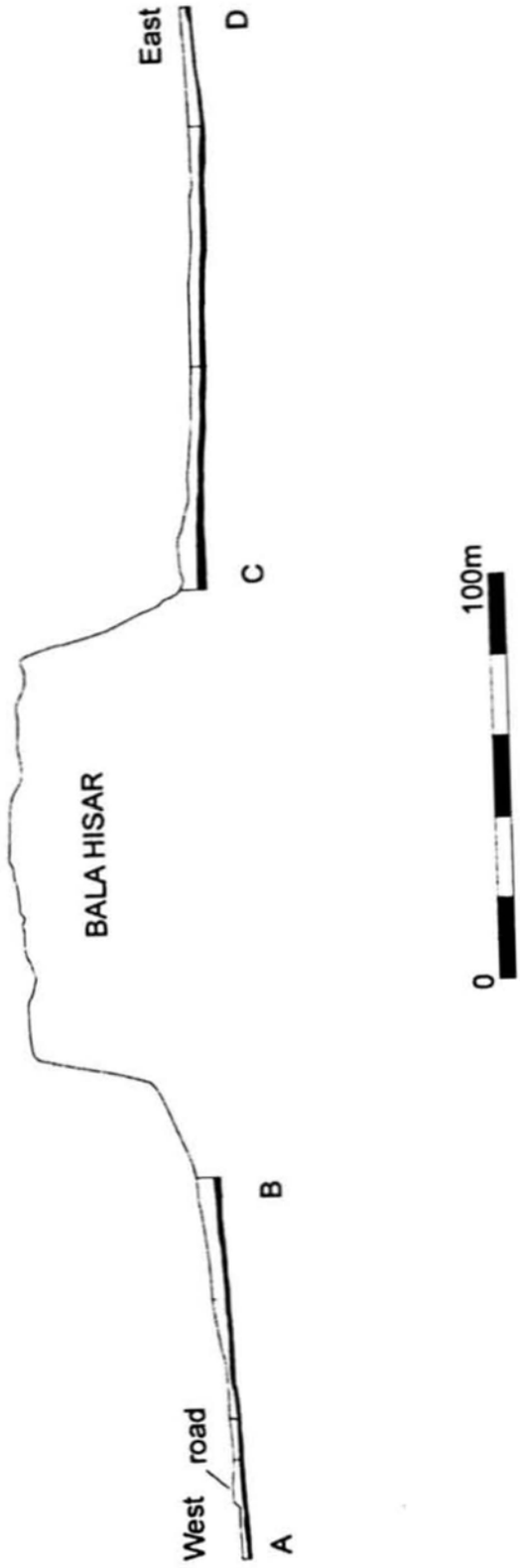


Figure 5.5: Auger profile through the Bala Hisar

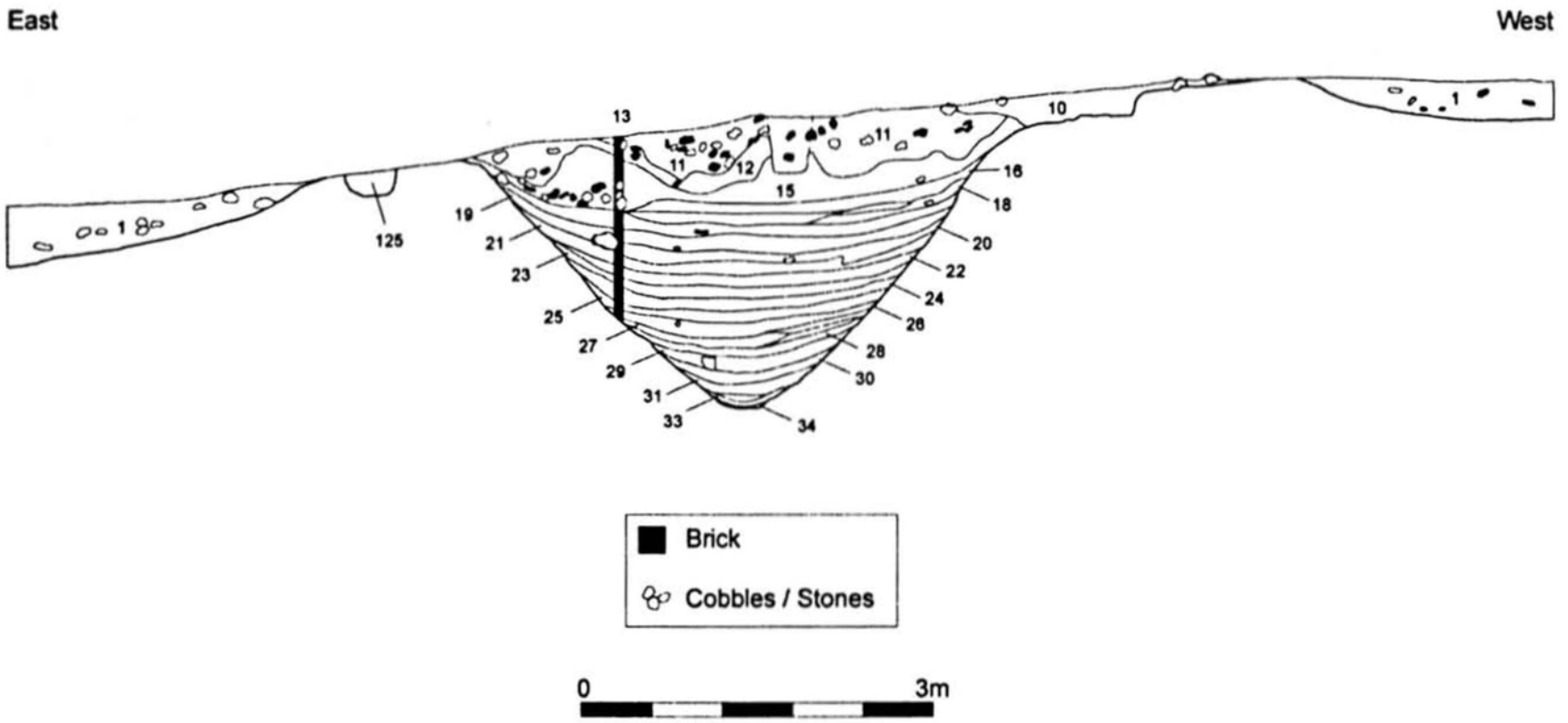


Figure 5.6: New perpendicular section through the ditch in trench Ch. III

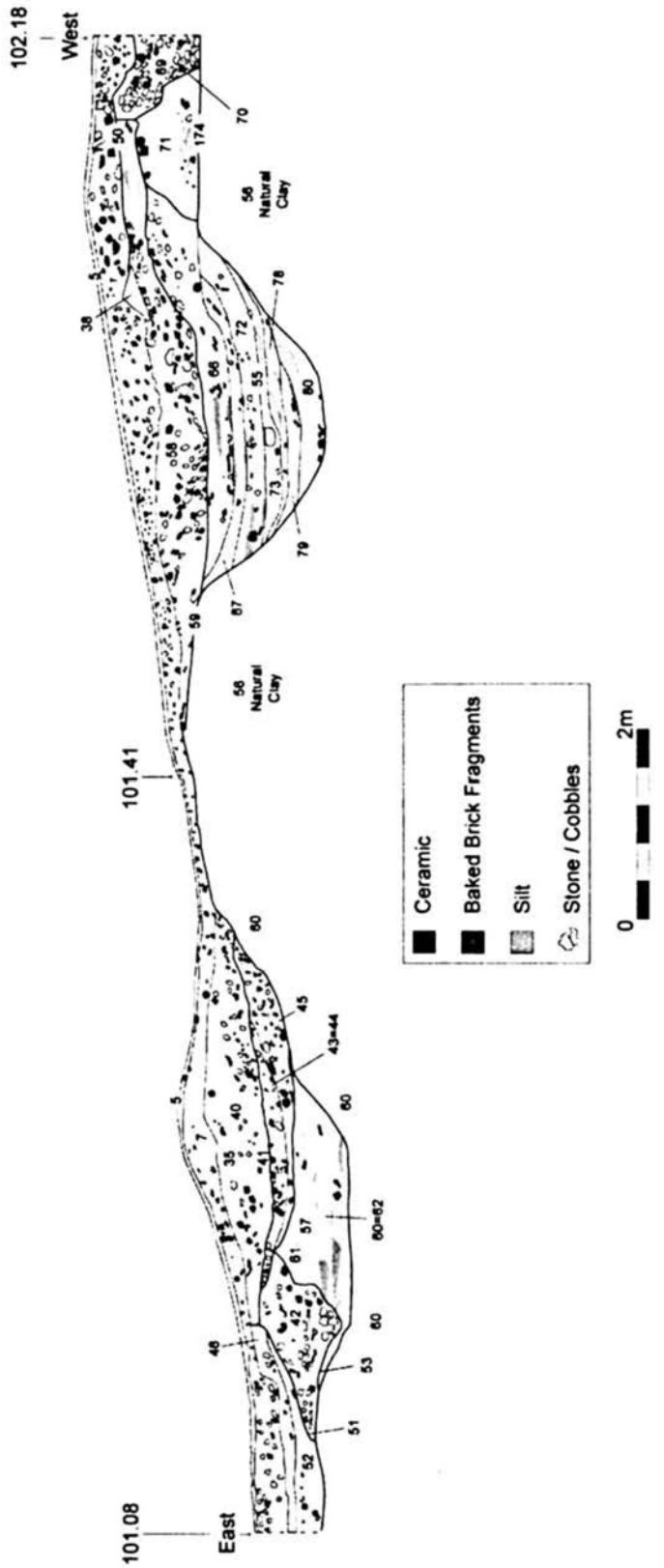


Figure 5.7: Section through trench Ch. VI

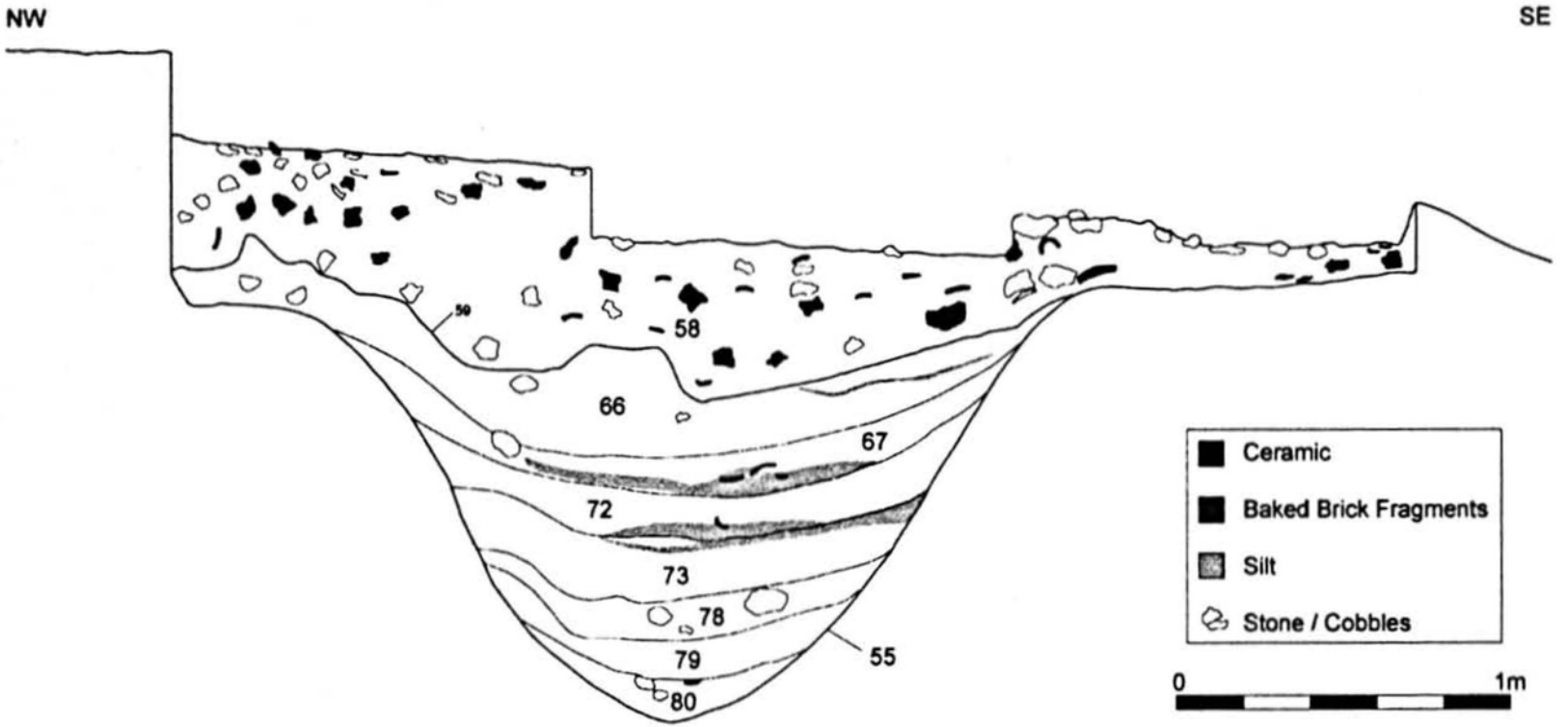


Figure 5.8: perpendicular section through ditch cut 55 in trench Ch. VI

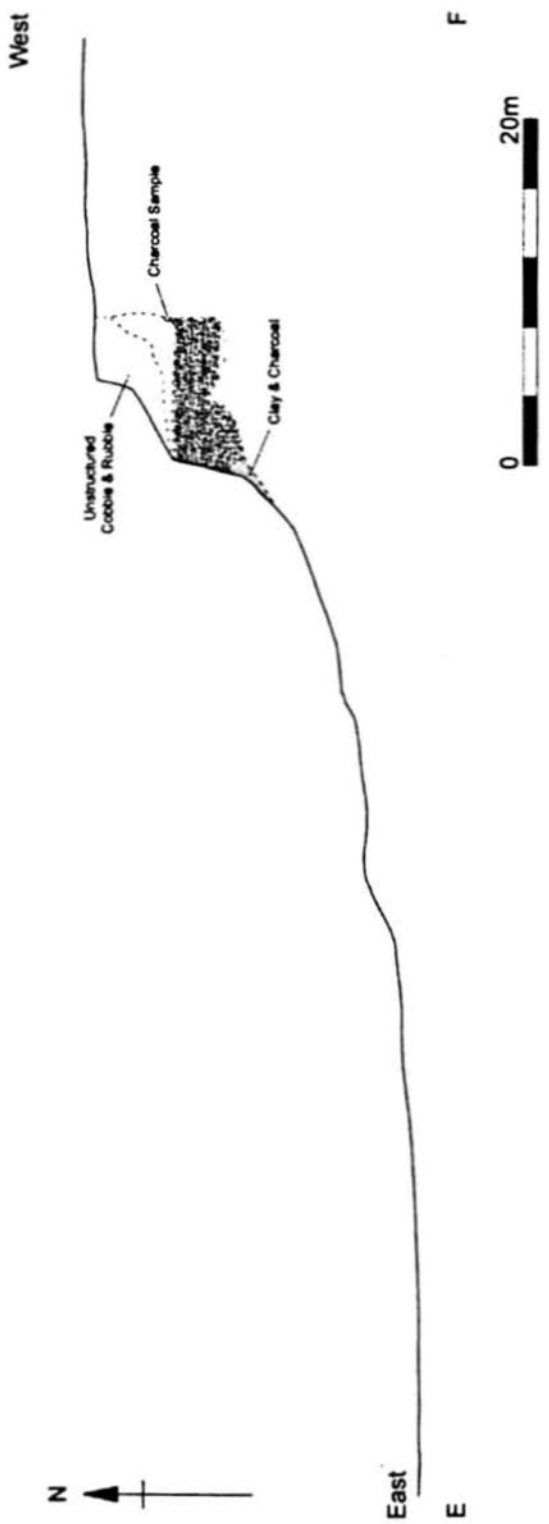


Figure 5.9: Elevation of mudbrick wall in trench Ch. VII

Plate 5.1: View of augering a profile across the Bala Hisar

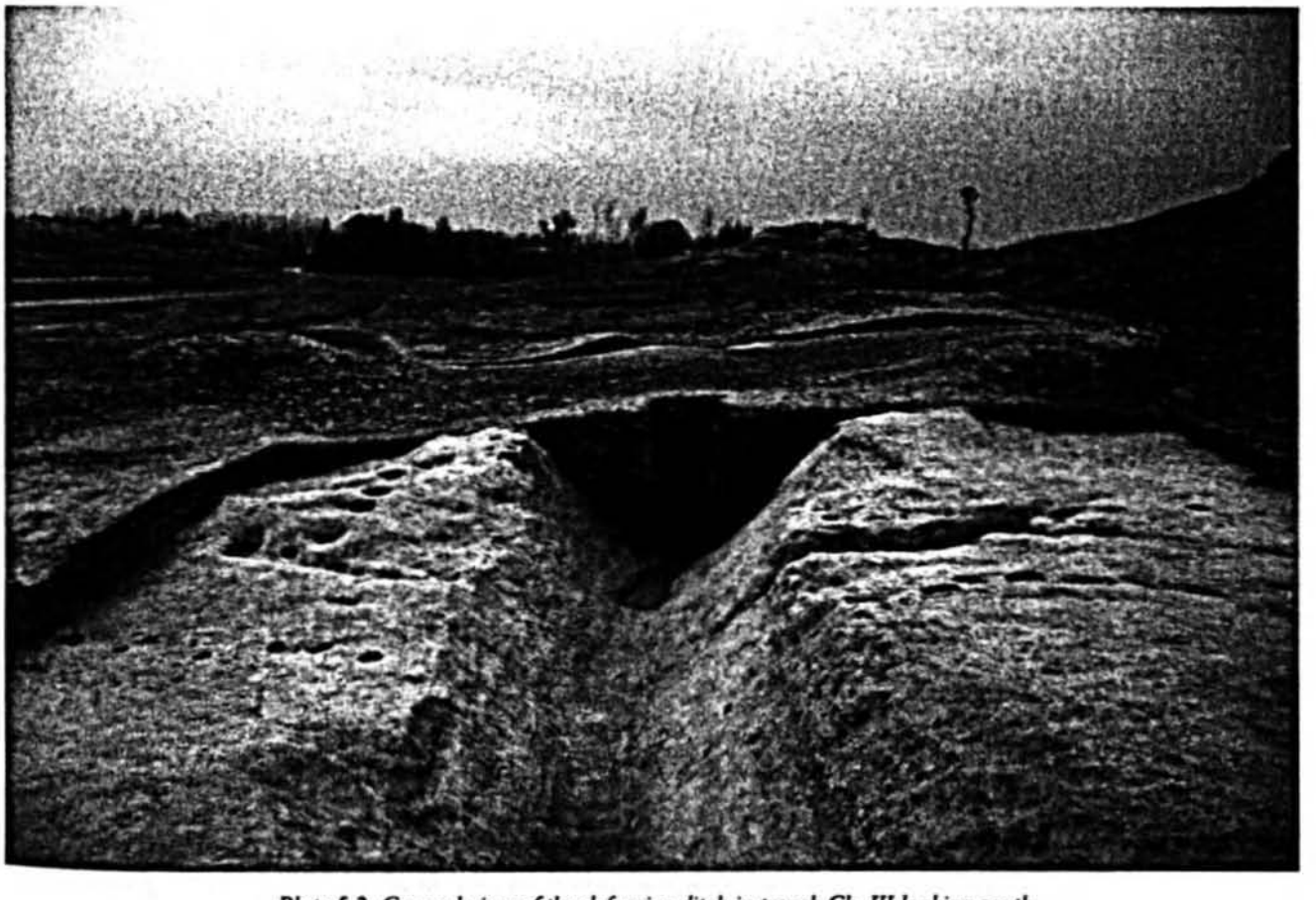


Plate 5.2: General view of the defensive ditch in trench Ch. III looking south

Plate 5.3: Detailed view of the southern section of the defensive ditch in trench Ch. III

Plate 5.4: General view of the 'postern gate' looking east

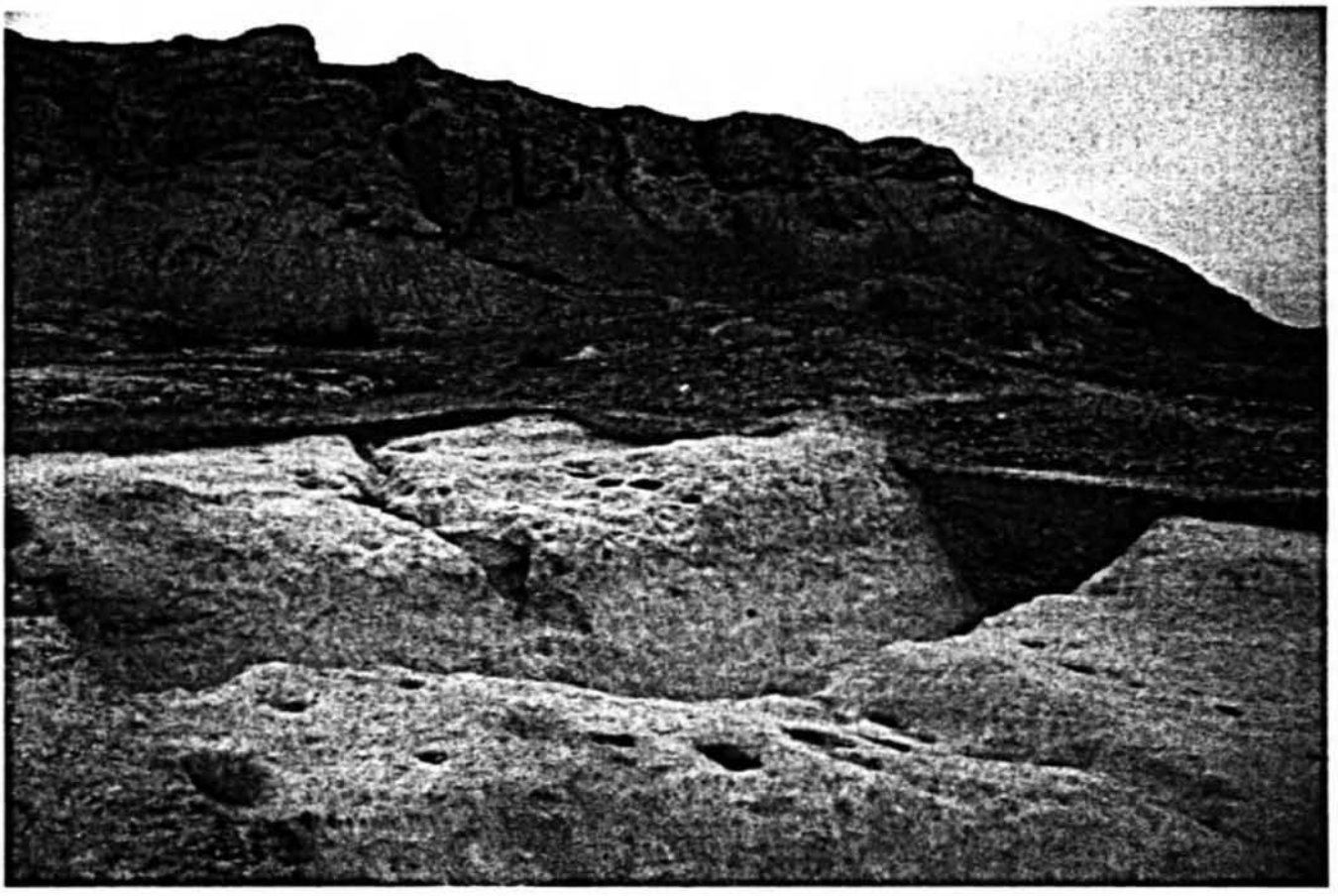


Plate 5.5: General view of the 'postern gate' looking west

Plate 5.6: General view of trenches Ch. III & Ch. VI looking east

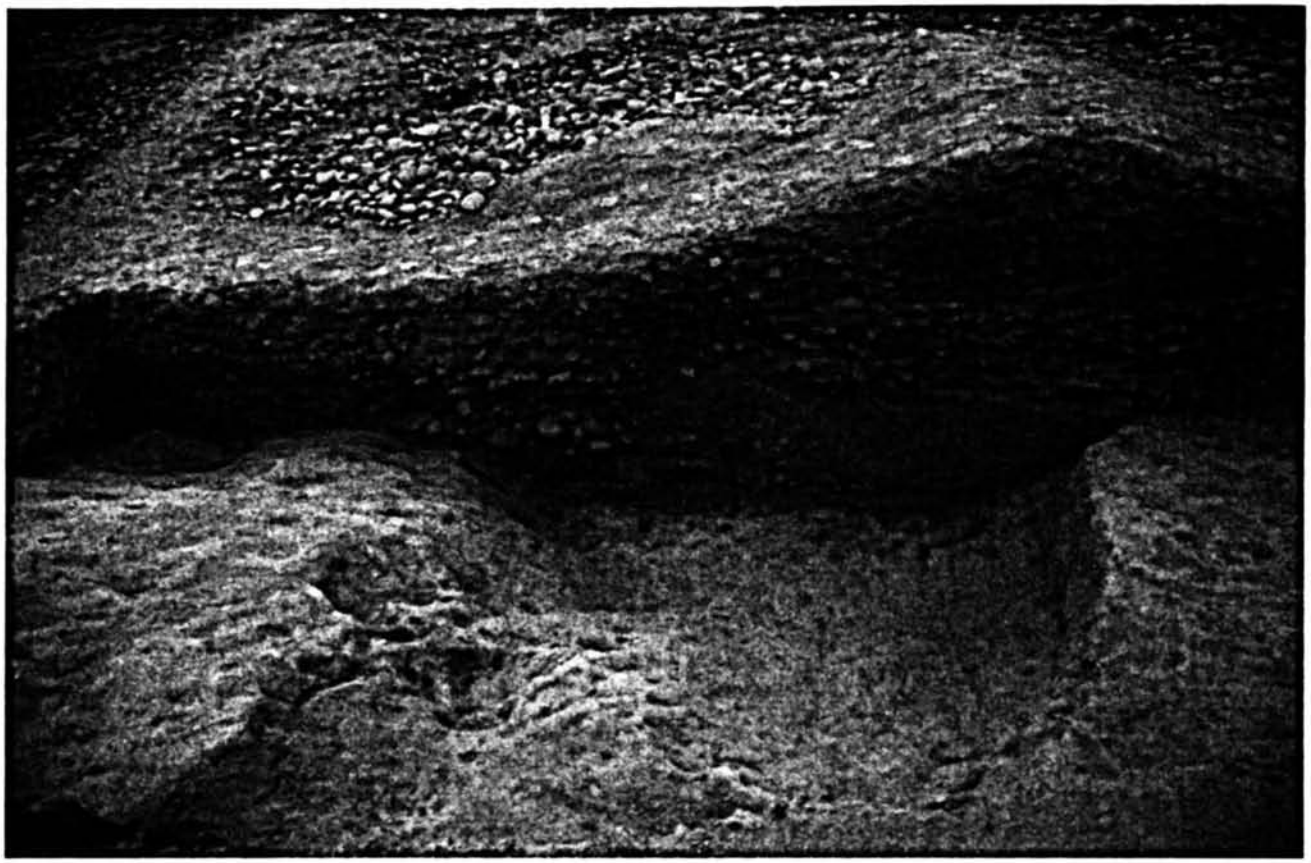


Plate 5.7: Detailed view of ditch cut 61 in trench Ch. VI looking south

Plate 5.8: View of mudbrick wall 174 in trench Ch. VI being planned in the foreground

Plate 5.9: View of ditch cut 55 in trench Ch. VI looking east

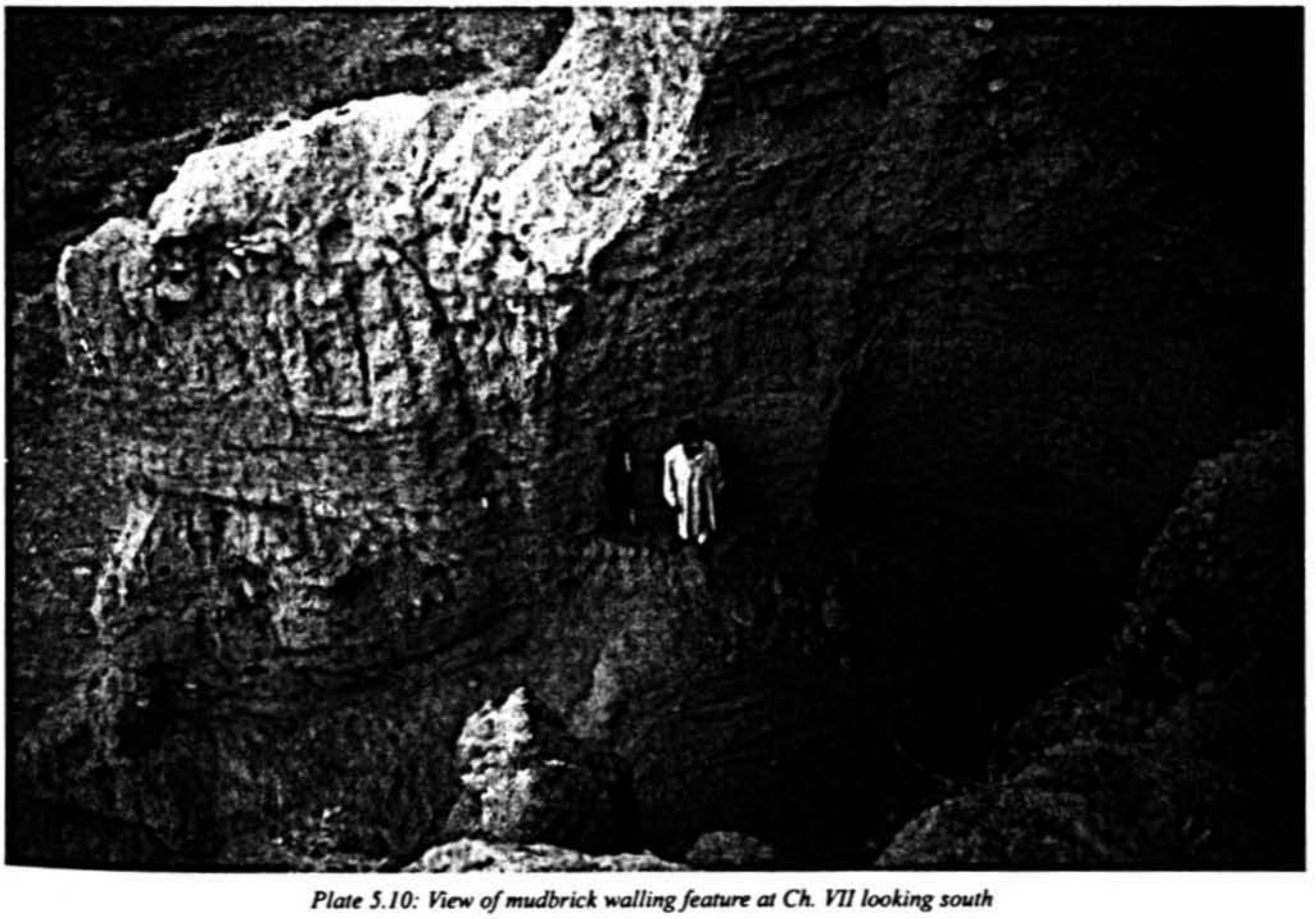


Plate 5.10: View of mudbrick walling feature at Ch. VII looking south

CHAPTER 6

THE HABITATION LEVELS

Robin Coningham & Ihsan Ali

6.1 INTRODUCTION

As in the case of our previous excavations and survey of the site in 1994 and 1995, the 1996 season was designed to test and, if possible, resolve specific questions concerning the early chronology and stratigraphy of the archaeological site. The major theme selected for 1996 concerned the nature and date of the earliest occupation of the Bala Hisar as Sir Mortimer Wheeler had concluded from his findings in trench Ch. I, that the site was originally settled as an Achaemenid colony during the 6th century BC (Wheeler 1962: 33). As it was unfeasible to re-excavate Wheeler's original trench as the area was too heavily eroded, it was decided to open a new trench some 5m to its south and 30m west of trench Ch. VI. Furthermore, we decided to restrict our investigations to the lower part of the site's sequence due to the vast amount of overburden and thus commenced operations close to the base of the cliff-like edge of the Bala Hisar mound (Plate 6.1). As noted in Chapter 1, it was this plateau area which first raised Wheeler's interests in the site because farmers and nature had removed historic overburden 'leaving the pre-mediaeval strata exposed to immediate attack' (Wheeler 1950: 51). Our trench was divided into two sections, trench Ch. VIII in the east and trench Ch. IX in the west (Plate 6.2). Trench Ch. VIII measured 8m E–W by 3m N–S and trench Ch. IX measured 3m N–S and between 4.30m and 5.5m E–W dependent on the irregular face of the eroded mound (Figure 6.1). As trench Ch. VIII became deeper we decided to subdivide the trench into two for safety reasons and the westernmost portion was excavated down to natural at a depth of 4.5m (Figures 6.2 & 6.3) (Plate 6.3). Activities in trench Ch. IX were restricted to elevation cleaning but a 1m wide slot trench was cut along its southern section in order to provide a stratigraphic link with trench Ch. VIII. In parallel with Wheeler's findings at the base of the mound in trench Ch. I, the upper levels of our trenches were clearly the result of soil robbing and collapse from the mound as attested by finds of glazed Islamic ceramics and even plastic, also in trench Ch. IX we noted the presence of bird nesting holes below the surface, indicative of recent collapse. The sequence consisted of five major phases of deposition A–F, of which A to D represent in-situ occupation levels. A broad discussion of the relative and absolute dating are of these phases is found in Chapter 7.

As can be seen in the section of trench Ch. I, in 1958 Wheeler encountered a sequence of structures utilising different construction materials (Wheeler 1962: 22 Plate II) (Figure 6.4). This may be combined with Marshall's and other regional findings to ascertain whether there is a viable relative chronology for the use of these materials within the Vale of Peshawar, its northern valleys and Taxila. Although he did not identify any of the fired brick walls of the modern structures close to the summit of the Bala Hisar, encountered by both Garrett (1882) and Marshall (1904), Wheeler exposed walls of baked brickbats and river cobbles in layer 7 and mudbrick walls set on cobble foundations (Wheeler 1962: 23). Wheeler dated these levels to between the 12th and 18th centuries AD, although he referred to the site's occupation as opportunistic (ibid.). Below these 'Muslim Period' levels in the 'Gandhara Period' layers, Wheeler encountered a wall faced on both sides with reused and broken thin baked bricks (27.5 x 27.5 x 3.8cm) and infilled with clay, stone and brick (ibid. 22). He dated these structures to between the second and fourth centuries AD (ibid.). In comparison with these reused materials, it is notable that Sir John Marshall's 'Gandhara Period' levels included examples of regular diaper patterned masonry (Marshall 1904: 148). Wheeler identified layer 17 as being 'pre-Gandharan' and recorded that he had identified a wall built on a foundation of boulders and comprising alternate courses of thin baked bricks measuring 27.5 x 27.5 x 3.8cm and small pebbles (Wheeler 1962: 22). The earliest baked bricks fragments were recovered from layer 23, measuring 8cm in thickness, and attributed by Wheeler to the Mauryan period and the 3rd century BC (ibid.). Below this 'baked brick' horizon, structures were constructed of mudbrick resting on pebble or cobble foundations as well as having mud plastered floors and circular hearths. The lowest levels, between layer 51 and 40, are roughly equivalent with the levels exposed and recorded with trench Ch. VIII/IX and were dated by Wheeler to the 6th century BC (ibid.: 18). Walls of mudbrick resting on pebble foundations as well as plastered floors were also encountered in these levels with individual brick size varying of around 31 x 31 x 9cm (ibid.: 20). Angular mudbrick structures were even identified within the very lowest levels of trench Ch. I (51), constructed out of the largest bricks on the site, which measured 40 x 35 x 8cm and 35 x 30 x 8cm (ibid.).

The very lowest levels of the Bhir Mound of Taxila were dated by Allchin to the 5th century BC (Allchin 1995: 127), and in them Sharif reported the presence of angular structures comprising rough walls of limestone

and river cobbles (1969: 19). However, the close availability of stone on the Hathial ridge makes analogies with Wheeler's sequence difficult. Such difficulties are also presented when trying to compare the structural sequence of the Bala Hisar with those of settlement sites within the Vale of Peshawar and its northern valleys. These problems are not just due to the scarcity of building stone in the alluvial soils of Charsadda but they also arise from the general archaeological failure to identify more than a few early settlements in the region. For example, Balambat is one of the few habitation sites identified by Dani as part of the Gandharan Grave Culture. However, there are no reports of mudbrick and it has only provided evidence of angular structures with circular storage rooms, all built of rough stone masonry, succeeded by a complex of rooms built of rough diaper masonry (Dani 1967: 242, 244) (Figure 6.5). This masonry tradition appears to have been a direct continuation of those dry-stone walling techniques utilised in constructing the many known burials of the Gandharan Grave Culture. Attempts to phase structures within those northern valleys have been impossible due to the easy availability of stone, as noted by the excavators of Aligrama 'building structures... are always dry-stone walls, built of irregularly-shaped blocks of stone, between which are often placed either whole pebbles or pieces of pebbles...those belonging to the different phases all express a very similar building technique, substantially simple and rudimentary' (Stacul & Tusa 1977: 294). Similar materials are reported from Bir-Kot-Ghwandai and Kalako-deray in the Swat valley and, perhaps understandably, no reports of the use of mudbrick within contemporary settlements in the other northern valleys. Therefore, few structural analogies are available to compare with the data recovered from our recent excavations at the Bala Hisar of Charsadda.

6.2 PHASE 8.A

As noted in Section 2.2, we now know that the cultural occupation levels at the Bala Hisar of Charsadda rest on the surface of a low mound of natural clay standing between 4 and 5m above the flood plain. Such a mound must have been attractive to settlers as it rose above the braded and shifting courses of the Swat and Kabul rivers and their tributaries. Indeed, the earliest human occupation at the site in the vicinity of Trench Ch. VIII consisted of a series of clay washes, containing fragments of ceramics and charcoal lying directly above natural clay deposits 1098. The earliest cultural stratigraphic phase, 0.5m thick old land surface 1094, yielded no structural remains but had clear evidence of occupation in the form of ceramic, bone and charcoal fragments within the compact, clay wash. A single radiocarbon measurement (GrN-22545) from context 1094 suggests that initial occupation in this part of the mound may date from the 14th century BC. As the lower half of the deposit had no cultural inclusions, it was assumed to be part of the site's natural deposits and differentiated as context 1097. Old land surface 1094 was then covered by 1078 (Figure 6.6). Another old land surface, 1078 was a 0.9m thick hard, silty clay containing flecks of ash, charcoal, bones and burnt pottery. Evidence of structural activities on its surface still existed in the form of three shallow postholes and one oven cut. The oven, 1083 (0.3m diameter and 0.15m depth) contained a soft, ashy fill (1082) containing burnt clay fragments, bone and some fragments of mudbrick (Plate 6.4). Posthole 1085 (0.14m diameter and 0.06m deep) was filled with ash 1084; 1087 (0.14m diameter and 0.06m deep) was filled with ash 1086; and 1089 (0.18m diameter and 0.09m deep) was filled with loose, silty-ash 1088. The exact structural relationship between the oven and three postholes is not clear but they may have formed a screen or part of a larger structure. We took the opportunity of augering a core into surface of the natural clay exposed in the bottom of trench Ch. VIII in order to test the height of the natural mound. We encountered the gray alluvial silt (1099), which underlies the entire area, at a depth of 2.6m below the surface of the natural clay mound.

6.3 PHASE 8.B

The features cut into old land surface 1078 were sealed by old land surface 1077 (Figure 6.7). This surface was a 0.05–0.20m thick soft ashy layer containing bone, charcoal and ceramic fragments. It was cut by pit 1092, which measured 1m in diameter and 1m deep, terminating in a concave base (Plate 6.5). Although extending under the northern section wall, we interpreted it as a possible pit burial when it was first encountered during the cleaning of the surface of 1077. This hypothesis was, however, refuted when its fill proved to be devoid of cultural material and bone and it became clear that it was entirely filled with rounded river cobbles and clay (fill 1091) (Figure 6.8) (Plate 6.6). The half section excavated contained a total of 222 cobbles ranging in size from a maximum of 0.19 x 0.12 x 0.08m and minimum of 0.06 x 0.04 x 0.02m. Old land surface 1077 yielded a radiocarbon sample (GrA-5250), which indicated a date of 1310–1050 BC. Pit 1091 and fill 1092 were partially covered by surface 1076 (Figure 6.9). A compact ashy-clay surface (0.25m thickness), it was cut by pit 1070 (Plate 6.7). Pit 1070 is extremely similar to pit cut 1092 and measured 1m in depth and 1m in diameter (Figure 6.10) (Plates 6.8 & 6.9). It was also filled with rounded river cobbles and clay (fill 1071) with a total of 781 cobbles, ranging in size from a maximum of 0.24 x 0.23 x 0.08m and minimum of 0.06 x 0.03 x 0.03m (Plate 6.10). Although pit cuts 1071 and 1092 are extremely similar in form and dimensions, they are complex to interpret as they were cut during different stratigraphic phases and the presence of small mounds of cobbles above the mouth of each further confuse their relationship. As for interpretation, the upper surface of fill 1091 appeared to have the traces of a 0.02m depression with a diameter of 0.37m, perhaps the vestiges of a slot or post pit (Plate 6.11). As many cobbles were pressed deeply into the sides of the pit, it is very likely that they supported a degree of weight, perhaps a pillar or post of timber. Such a hypothesis is not entirely unlikely as similar structures have been identified elsewhere. For example, Sharif uncovered a pillar base of limestone blocks and river cobbles in the very lowest levels of the Bhir Mound of Taxila (1969: 19).

Although we suggest that pit 1092, and its slightly younger counterpart 1071, may represent foundations locally adapted to the clay mound on which settlement was founded, it should also be noted that pits do appear to play an important role in the archaeological record of the northern valleys. For example, they are one of the integral features of the Kashmir Swat Neolithic as defined by Stacul (1995), and whilst it has been argued elsewhere that such features are not dwelling pits but grain storage pits (Coningham & Sutherland 1998), it is clear that they played important cult functions. They are not restricted to the Neolithic phases of the northern valleys, as they have also been found at Early Historic sites, such as Aligrama (Stacul & Tusa 1977) and Balambat (Dani 1967). Irrespective of this debate, pit fill 1070 was sealed by 1064, a surface of levelling or burning with fragments of brick, wall plaster, large angular sherds and shallow depressions (Figure 6.11) (Plate 6.12). In addition to containing the exposed top of cobbles from pit fill 1071, this layer contains features 1068 and 1074. Surface 1064 contained a small lense of burnt clay (1065), further underlining its levelled and mixed nature. Circular pit cut 1068 contained a soft clay fill with mudbrick fragments (1069), whilst cut 1074 was irregular in shape and depth, and contained a black fill (1073), rich in charcoal. Fill 1073 yielded a radiocarbon sample (OxA-9938), which provided a date of 1260–1040 BC. These features were sealed by levelling/foundation 1055=1063=1056.

6.4 PHASE 8.C

Structural phase C is represented by the presence of structures built in unbaked mudbrick, or rather clay slab. The first of these was constructed on a 0.35m thick foundation (1055=1063=1056) of mudbrick fragments. A 0.6m wide wall trench (1102) was then cut into these foundations and filled with courses of large rectangular clay slabs (Figure 6.12). This wall, context 1054, survived to a height of two courses and its slab bricks measured 0.20m by 0.10m and are notable as having no cultural inclusions. This suggests that they were sourced away from human contamination and may have just been cut to size from the natural clay of the mound on which the settlement sat. Similar slab bricks are still used today in the graveyard of Charsadda town and just cut from the underlying natural clay. The interior of the building, although badly damaged by later levelling, still contained an area of white floor plaster (1059=1060). One of the most striking features of structure 1054 was its apparent apsidal shape, although it should be noted that at least half of the building was under the eastern section (Plates 6.13 & 6.14). At least 5m wide and with the apse to the east, it should be noted that apsidal structures are usually associated with religious or ritual functions (Coningham 1999), although not always of Buddhist jurisdiction. For example, there are two apsidal chapels at Taxila, one in the main street of Sirkap and one in the Dharmarajika monastic complex (Marshall 1951) and a very early, perhaps Mauryan, example at Sarnath in India (Allchin 1995: 240). One may cite other Mauryan examples at Sanchi but it is striking that contemporary structures within the northern valleys are rectangular and built of rubble masonry and cobbles and have no evidence of apsidal features, making this building rather unique in view of its early phasing. As only part of the structure was exposed, we did consider the possibility that it represented part of a circular structure attached to a rectangular building, as in the case of some of the structures of Balambat Period III (Dani 1967: 242). The absence of a clear circular feature within the building proves that this is not the case however.

Circular pit (1061), measuring 0.60m in diameter and 0.07m in depth, was later cut into wall 1054 and yielded bone fragments in its loose fill (1062). A radiocarbon sample from this latter context (GrA-8358), yielded dates of c. 1210–1020 BC. Apsidal structure 1054 was then levelled and a new foundation/levelling layer of ash, clay, rounded cobbles, plaster, brick and pottery fragments was constructed. A 0.3m deep and 0.8m wide foundation trench (1101) was then cut roughly NW–SE through these foundations and filled with large mud slabs, forming wall 1049 (Figure 6.13) (Plate 6.15). Individual bricks measured 0.8m long, 0.3m wide and 0.11m thick and were again devoid of cultural intrusions. Wall 1049 was firmly anchored as it rested directly on plaster floor 1059=1060 of the preceding structural phase and survived to a height of three courses in places. The foundation/levelling layer was designated 1052 to the south of the new wall and 1051 to its north. Also during the same stratigraphic phase, oven 1044 was cut into surface 1052 and later filled with charcoal and burnt clay (1045). Brick wall 1049 was then joined by the addition of a wall of single brick thickness (1047) at right angles. Wall 1047, surface 1052 and oven 1045 were then sealed by plaster floor 1039.

6.5 PHASE 8.D

The final in-situ occupation of the trench is characterised by the presence of structures mainly defined by surviving foundations of river cobbles. Old land/levelled surface 1031, which sealed wall 1047 and plaster 1039, was utilised for features and constructions. Old land surface 1031 yielded a radiocarbon sample (OxA-9835), which was dated to between 990 and 1190 BC. This occupation consisted of three foci of activities, pits, a building and a major retaining wall. Two pits were cut into surface 1031 in the southern half of the trench, cut 1042 and 1041 (Figure 6.14). Pit 1041 measured and contained a single fill of silt (1040), whilst 1042 contained a basal fill of burnt clay and ash (1050) with a secondary fill of bone, shell, rounded cobbles, mudbrick and large ceramic sherds (1043). A shallow trench, 1100, was cut into 1031 to the west of pits 1042 and 1041 and filled with rounded river cobbles to form a 0.4m wide wall (1030) running 1.8m in an E–W orientation across the middle of the trench (Plates 6.16 & 6.17). Associated with this rectangular structure and within its wall melt (1021) were charcoal lense 1032, sandy-silt lense 1034 and clay lense 1037, all deposited during together. Charcoal lense 1032 yielded a radiocarbon sample (OxA-9939), which was dated to 1190–770 BC. As noted in Chapter 5, the third focus of activity was the construction of a large mudbrick wall (1096) at the very western edge of trench Ch.VIII (Figures 6.2 & 6.3)

(Plate 6.18). Cut into N–S foundation trench 1103 and set in mud mortar, it measured 2.25m wide and survived to a height of 0.5m (Plate 6.16). It is likely to have represented a major revetment or terrace. Our final structure is difficult to link directly and stratigraphically with the preceding features as many relationships have been removed by robber pit 1024, however, it appears that melt 1021 was sealed by old land surface 1028. A shallow foundation trench (1105) was cut into this surface and then filled with rounded river cobbles (1104) forming the corner of a square or rectangular building (Figure 6.15). It is the last structure for which we have in-situ stratigraphic evidence.

6.6 PHASE 8.D

Phase D consists of the many layers filling robber pit 1024, but no attempt has been made to differentiate the phasing of these fills and they represent a combination of erosion, collapse and mixing (Plate 6.19). It should be noted, however, that many of our most complete artefacts and glazed ceramics came from the badly disturbed fills of this late intrusive feature.

6.7 PHASE 8.E

Phase 8.E represents the final phase of deposition at the Bala Hisar of Charsadda. Consisting entirely of context 1000, it has been interpreted as the result of the gradual erosion and stabilisation of the site since its enhanced protection in the 1940s by the Federal Department of Archaeology and Museums.

6.8 CONCLUSION

A number of broad similarities may be drawn between the features identified in trench Ch. VIII/IX and those identified in Wheeler's trenches Ch. I and IIIA. All these trenches encountered the results of major robbing in the vicinity of the base of the mound's cliff. As Wheeler stated in 1962, this was the result of 'incessant undercutting designed to produce falls of the rich-occupation earth, which was then used by local cultivators as top dressing' (1962: 18). We have made no attempt to reconstruct the original stratigraphy of these layers of slump and collapse as it would have been too time consuming and provided little reward. We have, however, discussed the artefacts recovered from these layers as they include some of our best-preserved objects. Both trench Ch. I and trench Ch. VIII/IX yielded in-situ occupation evidence below the base of the robber cuts. In Sir Mortimer Wheeler's case, these levels were encountered 2m below the surface and in the case of trench Ch. VIII/IX, they were 3.25m below. We were fortunate, however, in also finding almost twom of in-situ occupation. Like Wheeler's earliest in-situ layers (50, 50a & 45) (ibid.: 20), we also found evidence of large unbaked mudbrick, or rather clay slab, walls and mud-plaster floors in our earliest layers. We also had evidence of cobble foundations in slightly later phases as Wheeler had experienced in layers 39 and 33 but still with the occasional use of clay slab (ibid.: 21). Our levels were too low, and too old, to contain the baked bricks recorded by Wheeler, having first become evident in his sequence in layer 23 and dated by him to the Mauryan period and the 3rd century BC (ibid.: 22).

In terms of structural analogies within the region, there are a number of points which can be made, although many of our structures were either incomplete or badly damaged. Firstly, it should be noted that the use of dressed stone is absent from Ch. VIII/IX and was only encountered by Marshall in the very top levels of the Bala Hisar in 'Buddhist' or Kushana levels (1903). This is due, as mentioned above, to the absence of available stone in the vicinity of the Charsadda and thus presents a very different structural sequence from that available at Taxila to the south (Sharif 1969: 19) and Balambat and Aligrama to the north (Dani 1967; Stacul & Tusa 1977). Our interpretation of cobble-filled pits 1070 and 1092 as pillar foundations is further supported by Marshall's excavations at the Bhir Mound, Taxila, where he found pits of similar dimensions filled with rubble, stone blocks and cobbles (1951: 96). As they were positioned in the centre of rooms, or on their walls, he interpreted them as foundations for structural timber roof supports. A further example from the Bhir Mound was excavated by Sharif and suggests that one of the earliest buildings to be found was provided with a 1m deep pit filled with 12 courses of limestone and river cobbles in its interior (1969: 19). Presumably, this and the examples from the Bala Hisar functioned as foundations for timber roofs supports as frequently found in later buildings (Callieri 1992: 21). The frequency and importance of circular pits within the archaeological record of the northern valleys, however, should not be forgotten (Coningham & Sutherland 1998). As also noted above, slightly higher up the sequence close analogies may be made between apsidal structure 1054 with the apsidal temples of Sirkap and Dharmarajika (Marshall 1951) as well as the Mauryan temples at Sanchi and Sarnath (Allchin 1995: 244). Another, but unpublished example, is the stone apsidal building excavated by Wheeler at the Bhir Mound between 1944 and 1945 (Allchin 1995: 234). It should also be remembered that the Jivakarama monastery of Mauryan Rajgir consisted of rectangular buildings with apsidal end (Allchin 1995: 246), a feature that the wall 1054 may also represent. Not wishing to presage the dating discussion in Chapter 7, it should be noted that this apsidal structure with its date of 1210–1020 BC is one of the earliest encountered but that this may be due to combination of factors ranging from poor archaeological visibility and the use of very small trenches at Early Historic sites to the infrequent application of radiocarbon dates. The debate must now be, why such structures should not have had a long tradition of use before they were absorbed into cult use? Having thus introduced the stratigraphic sequence of both the fortifications and the habitation levels, it is now necessary to discuss the dating of that sequence within the next chapter.

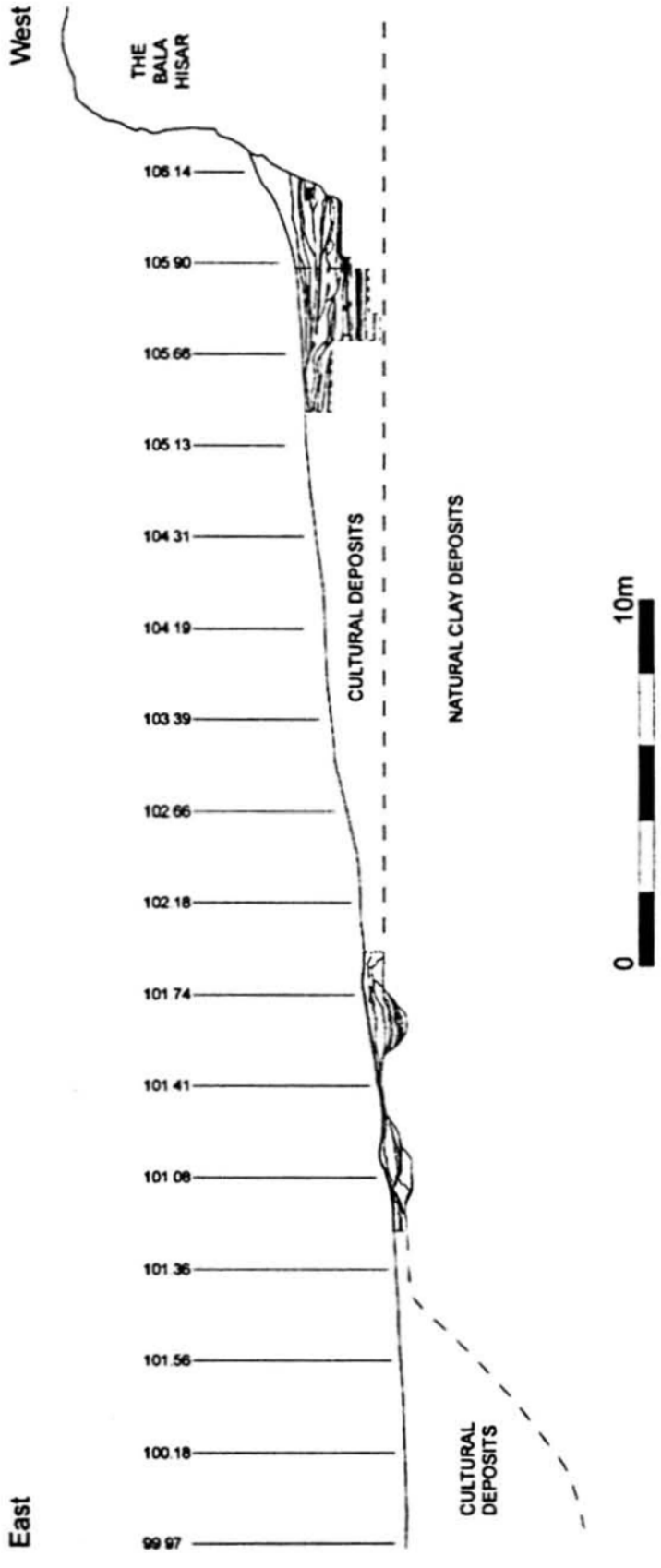


Figure 6.1: Section of the Bala Hisar from trench Ch. VI to trenches Ch. VIII & IX

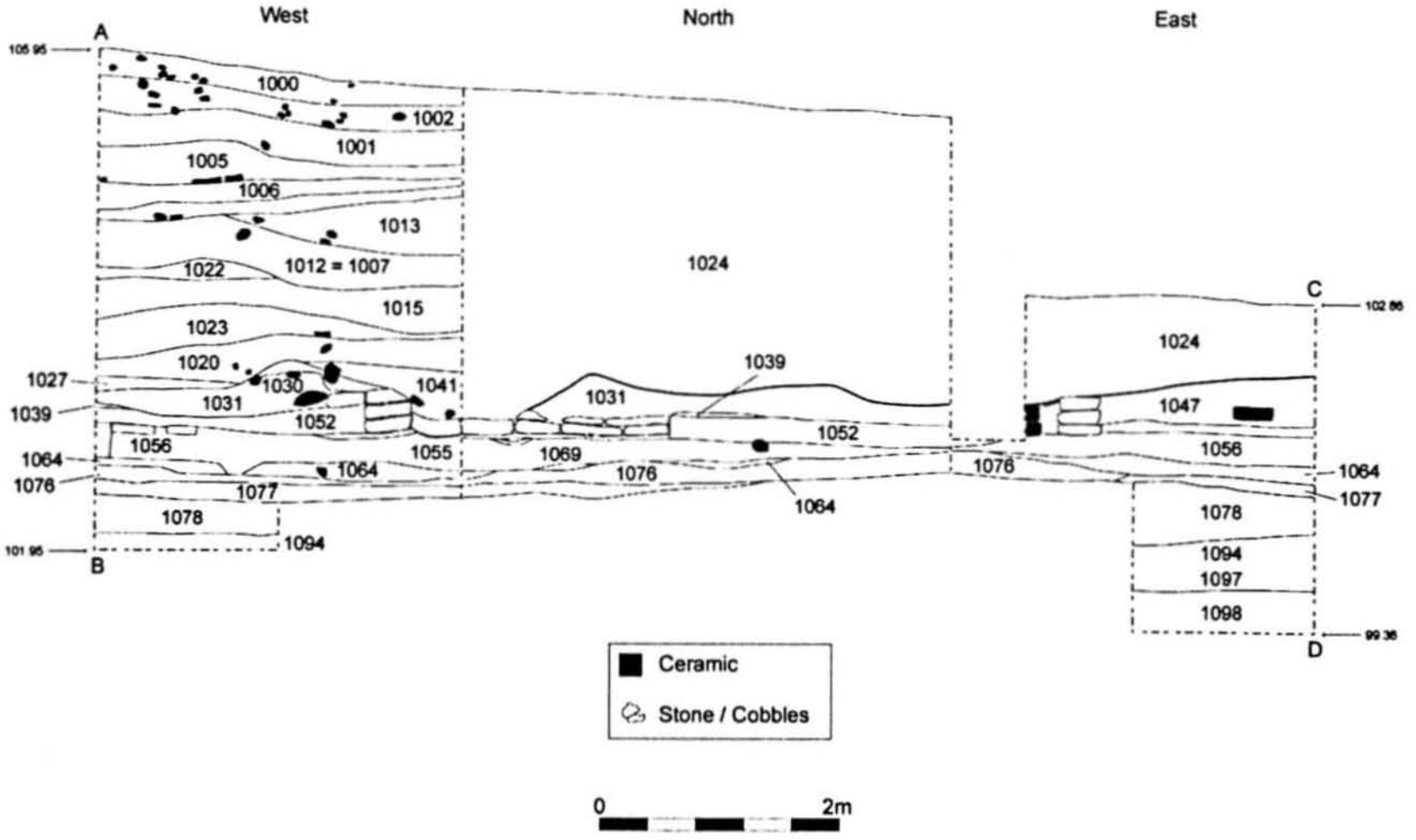


Figure 6.2: Section through trenches Ch. VIII & IX

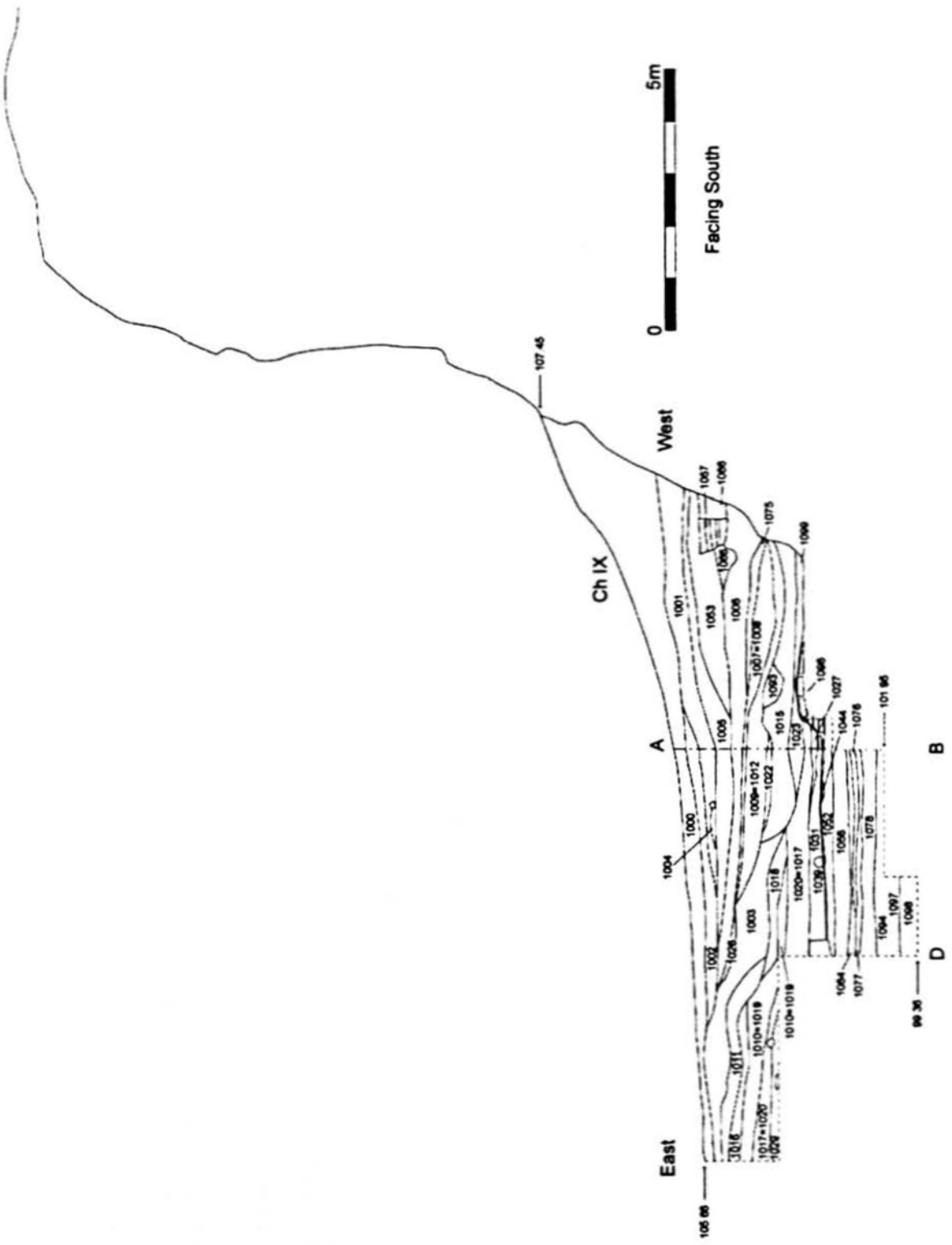


Figure 6.3: Sections through trench Ch. VIII

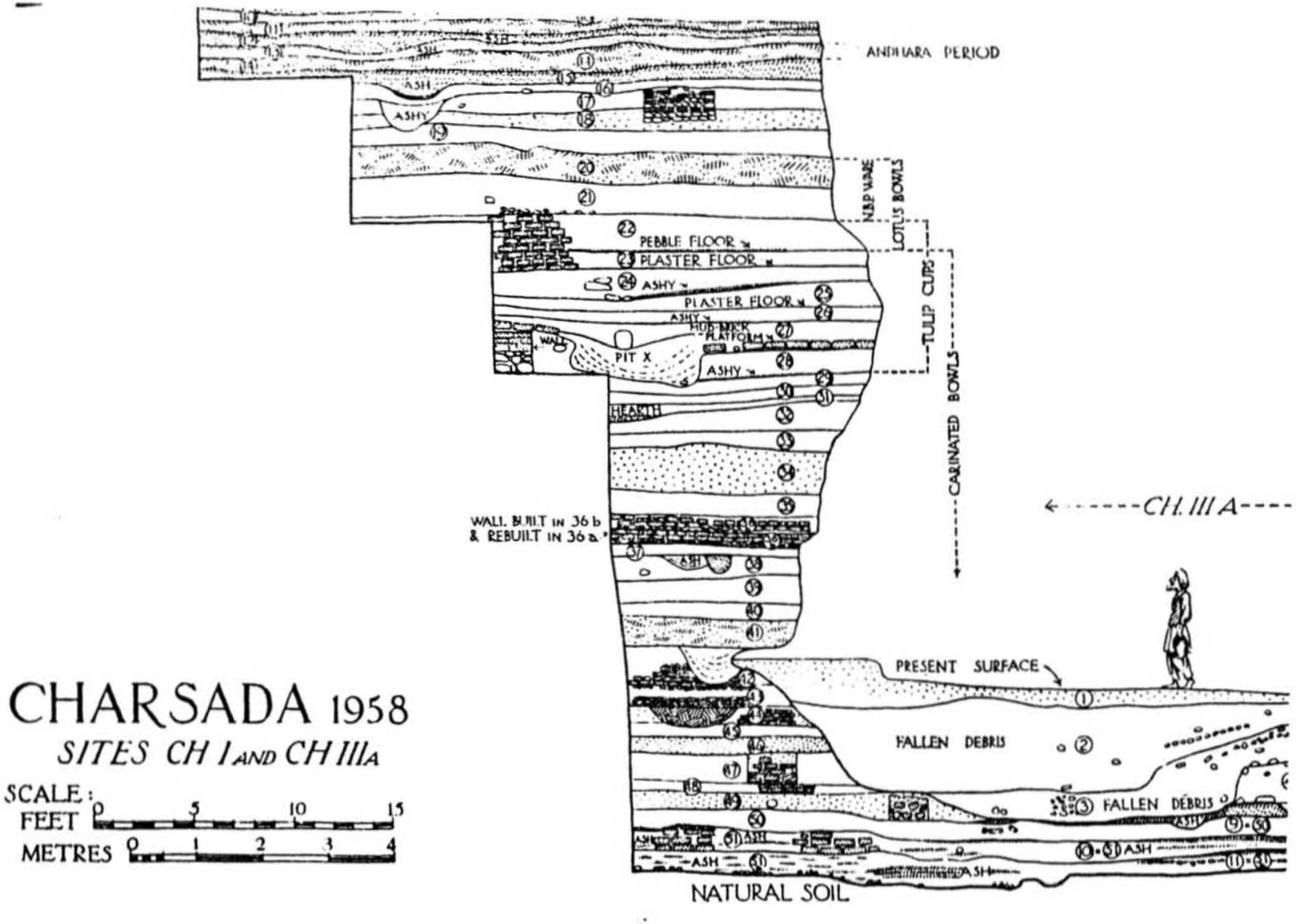


Figure 6.4: Detail from Wheeler's section of trench Ch. I

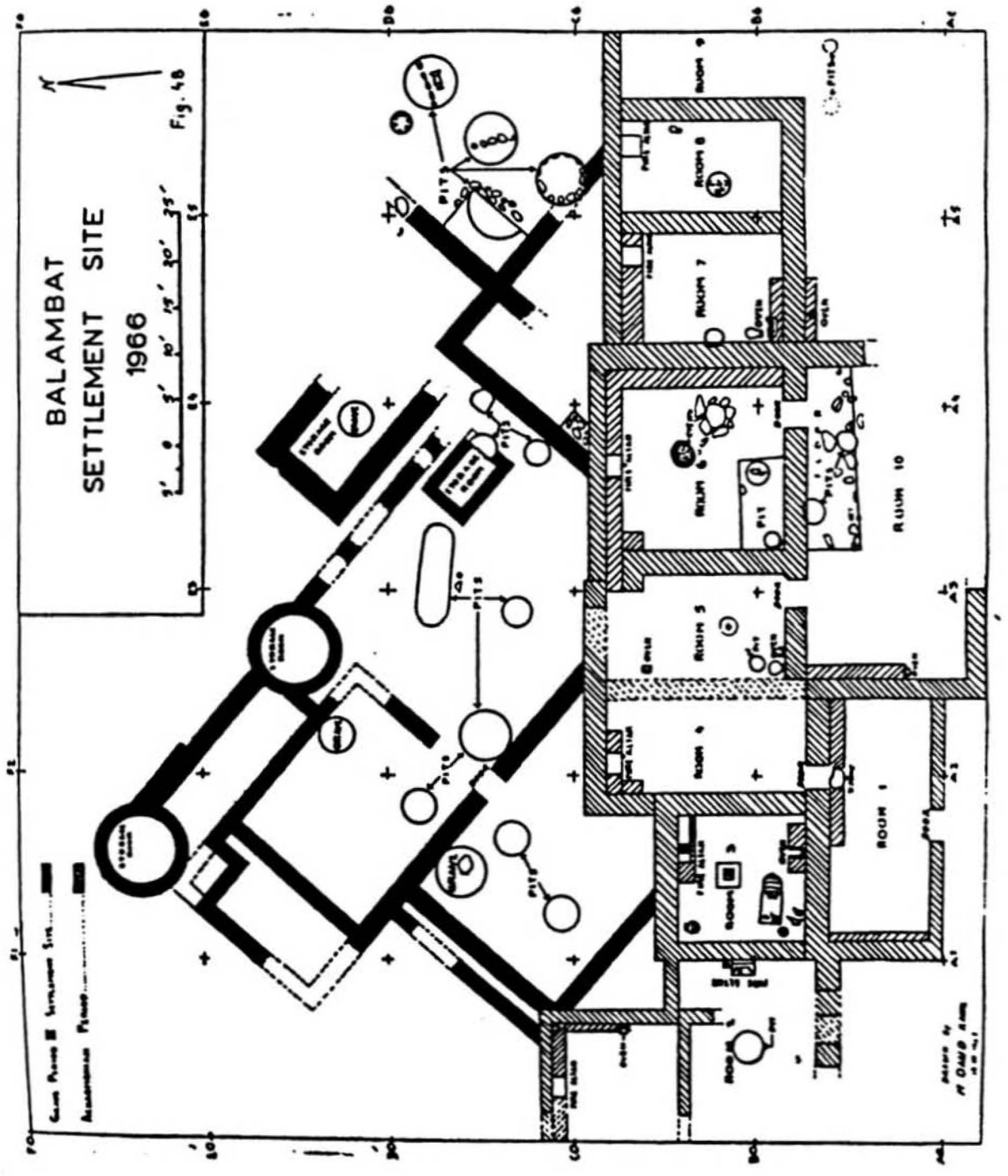


Figure 6.5: Detail of structures at Dani's excavations at Balambat

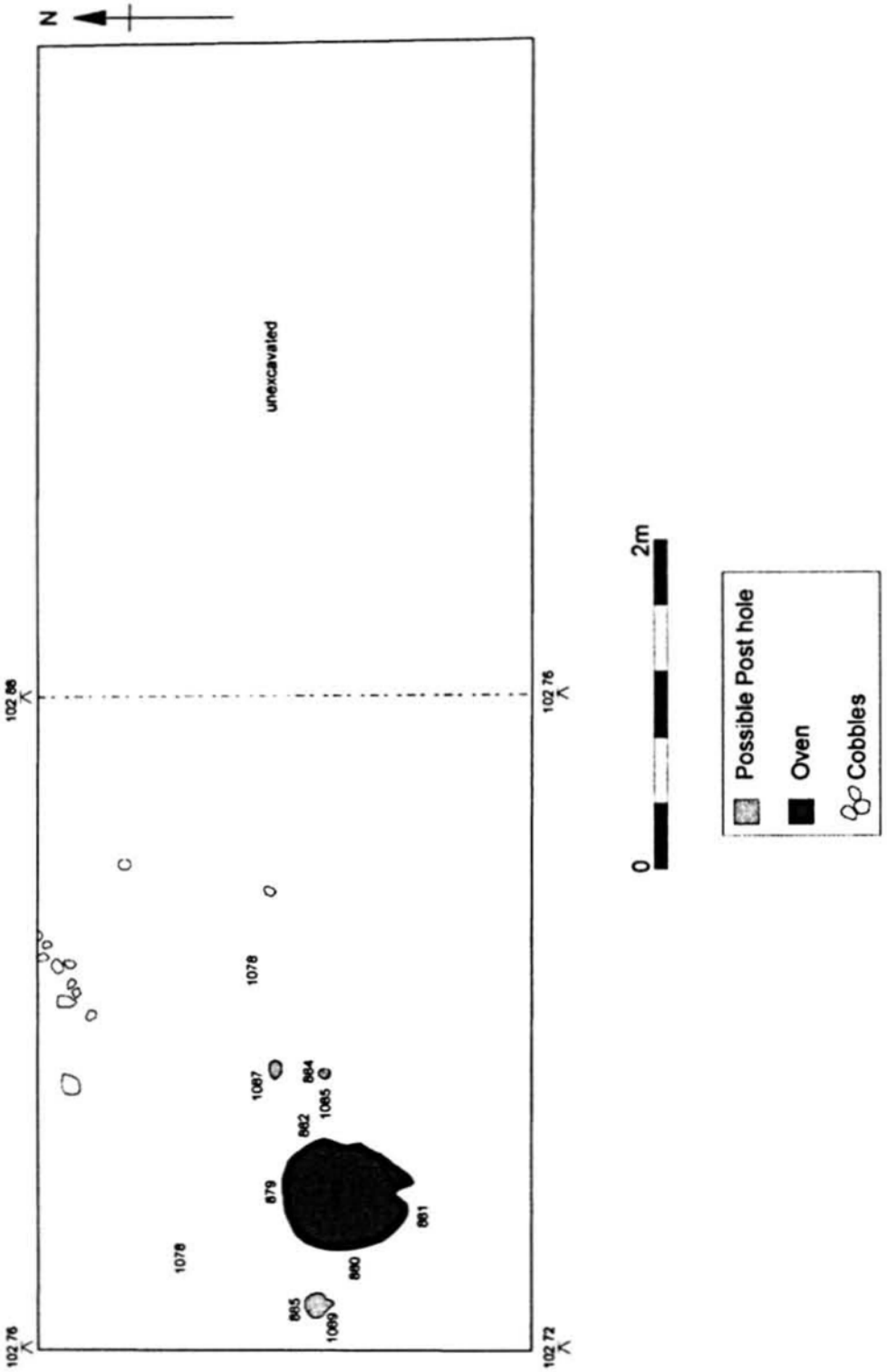


Figure 6.6: Plan of features cut into old land surface 1078 (Phase 8.A)

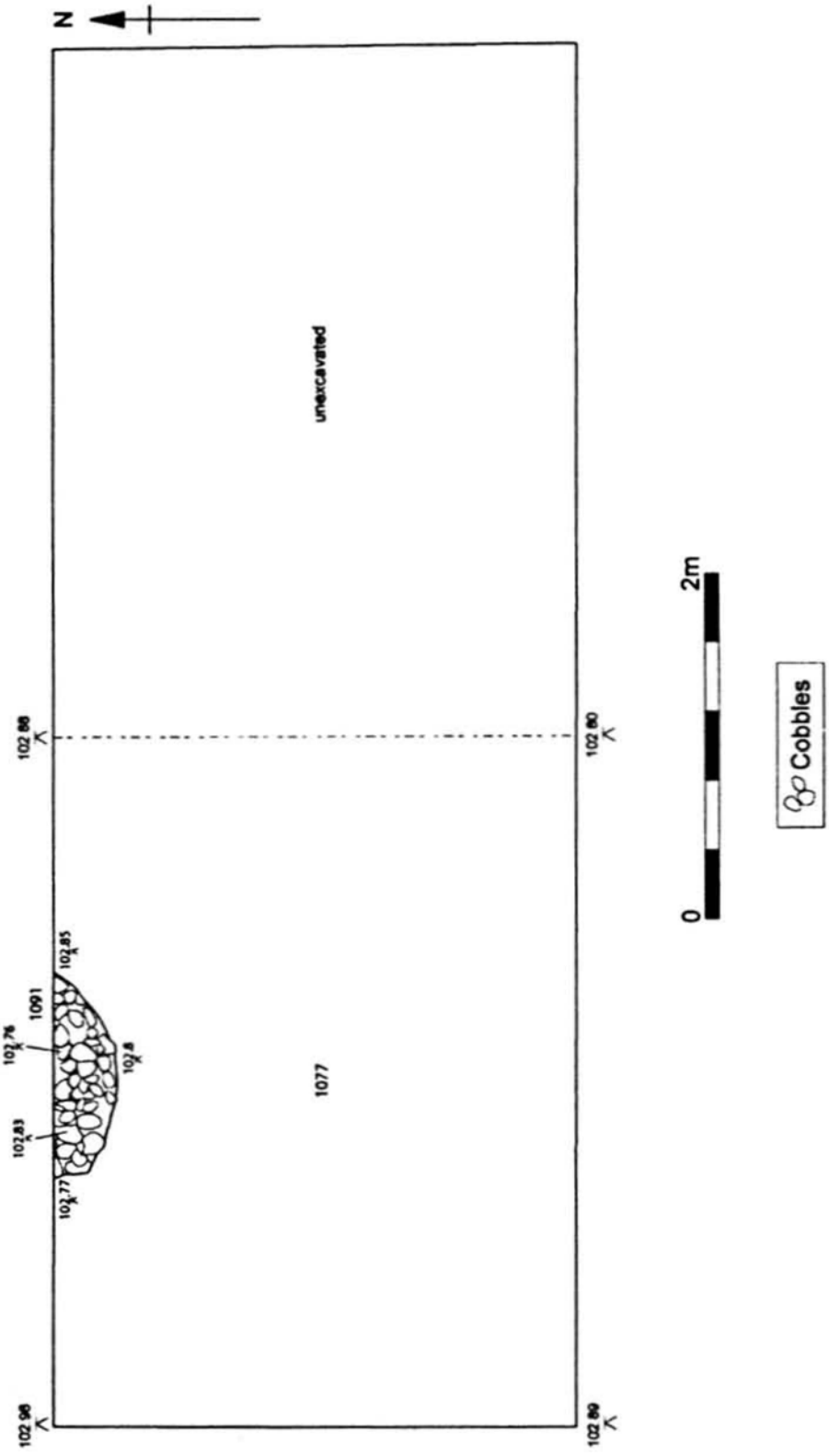


Figure 6.7: Plan of features cut into old land surface 1077 (Phase 8.B)

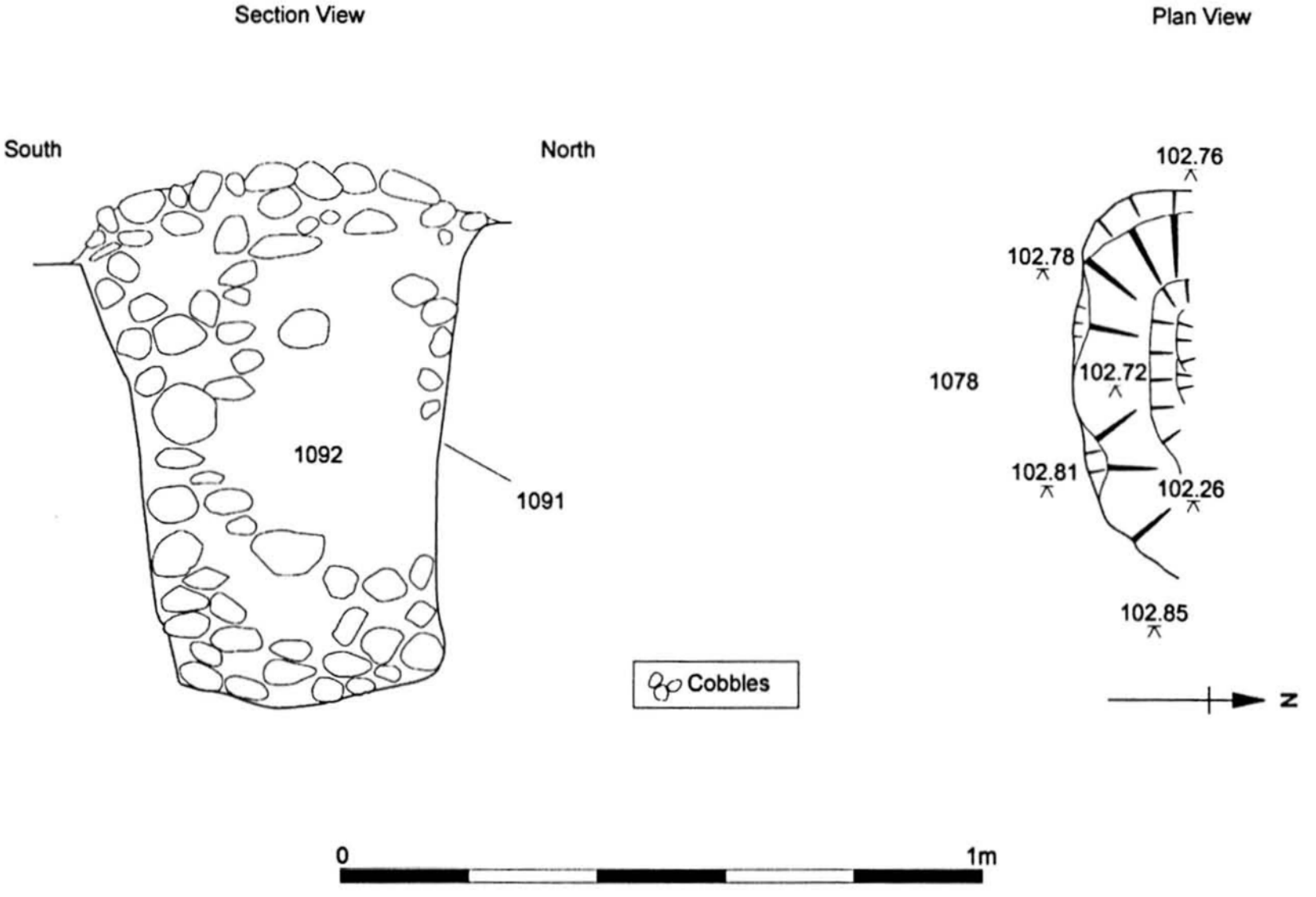


Figure 6.8: Plan and section of cobble-filled pit 1092 (Phase 8.B)

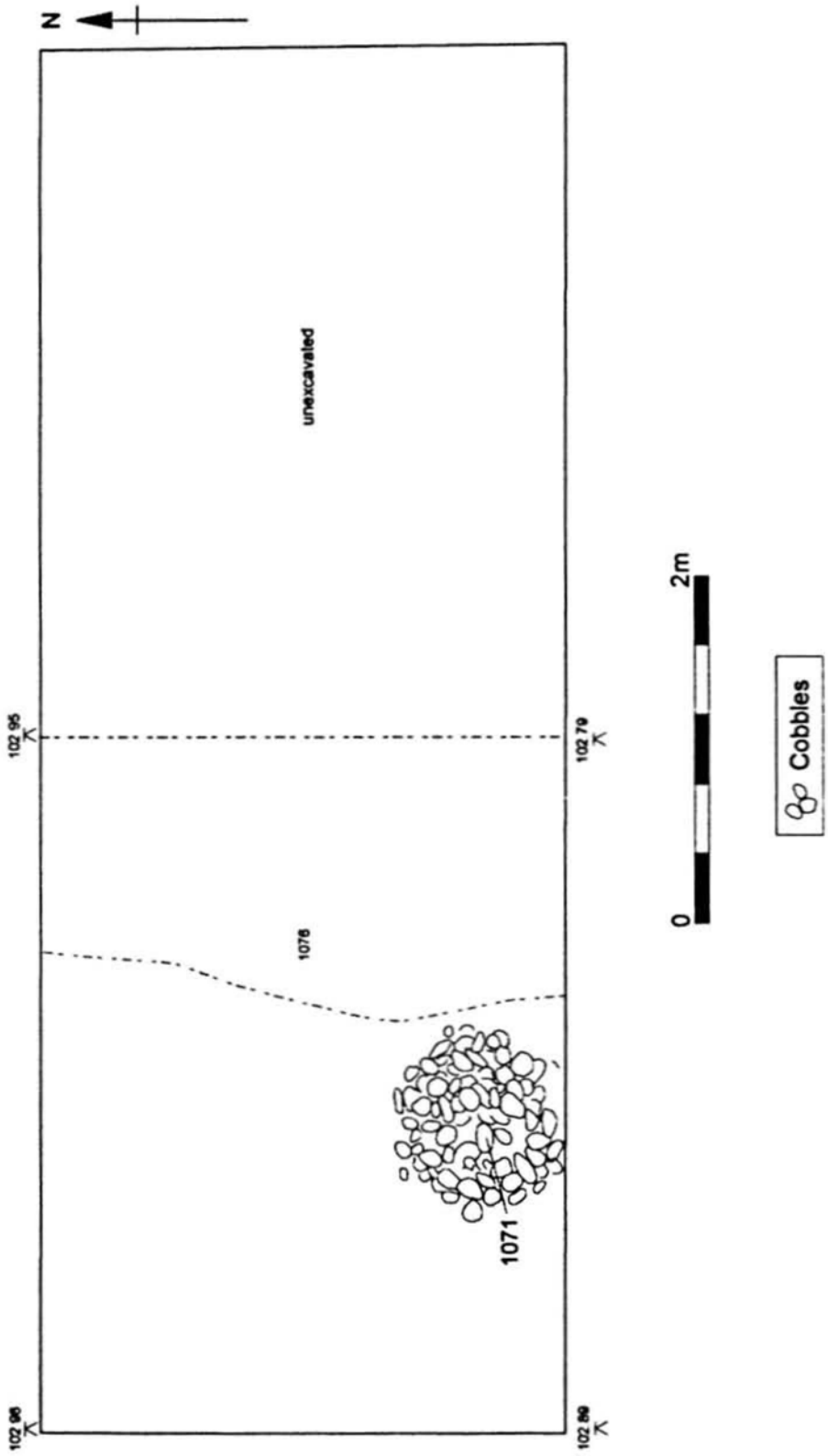


Figure 6.9: Plan of features cut into old land surface 1076 (Phase 8.B)

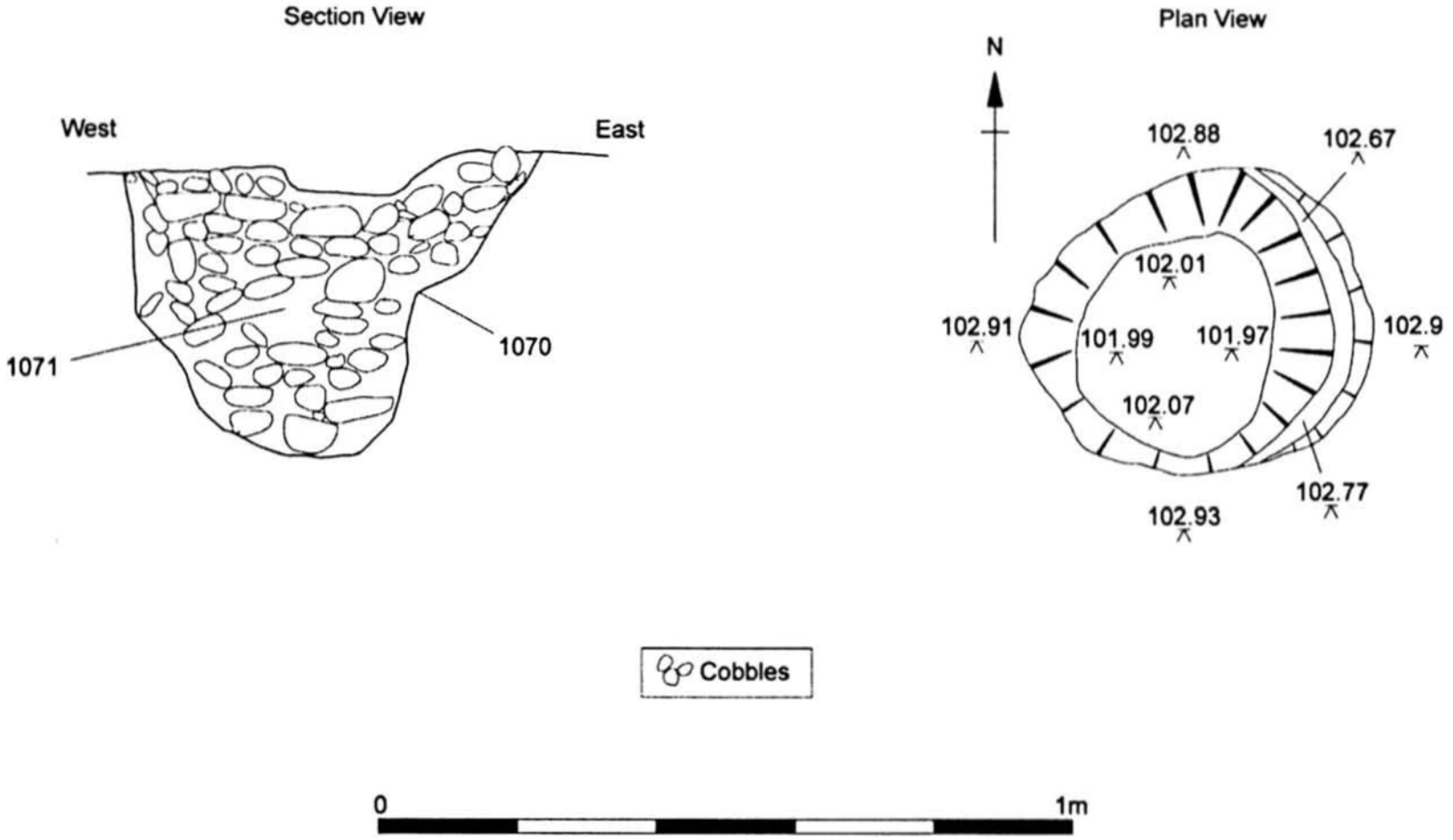


Figure 6.10: Plan and section of cobble-filled pit 1070 (Phase 8.B)

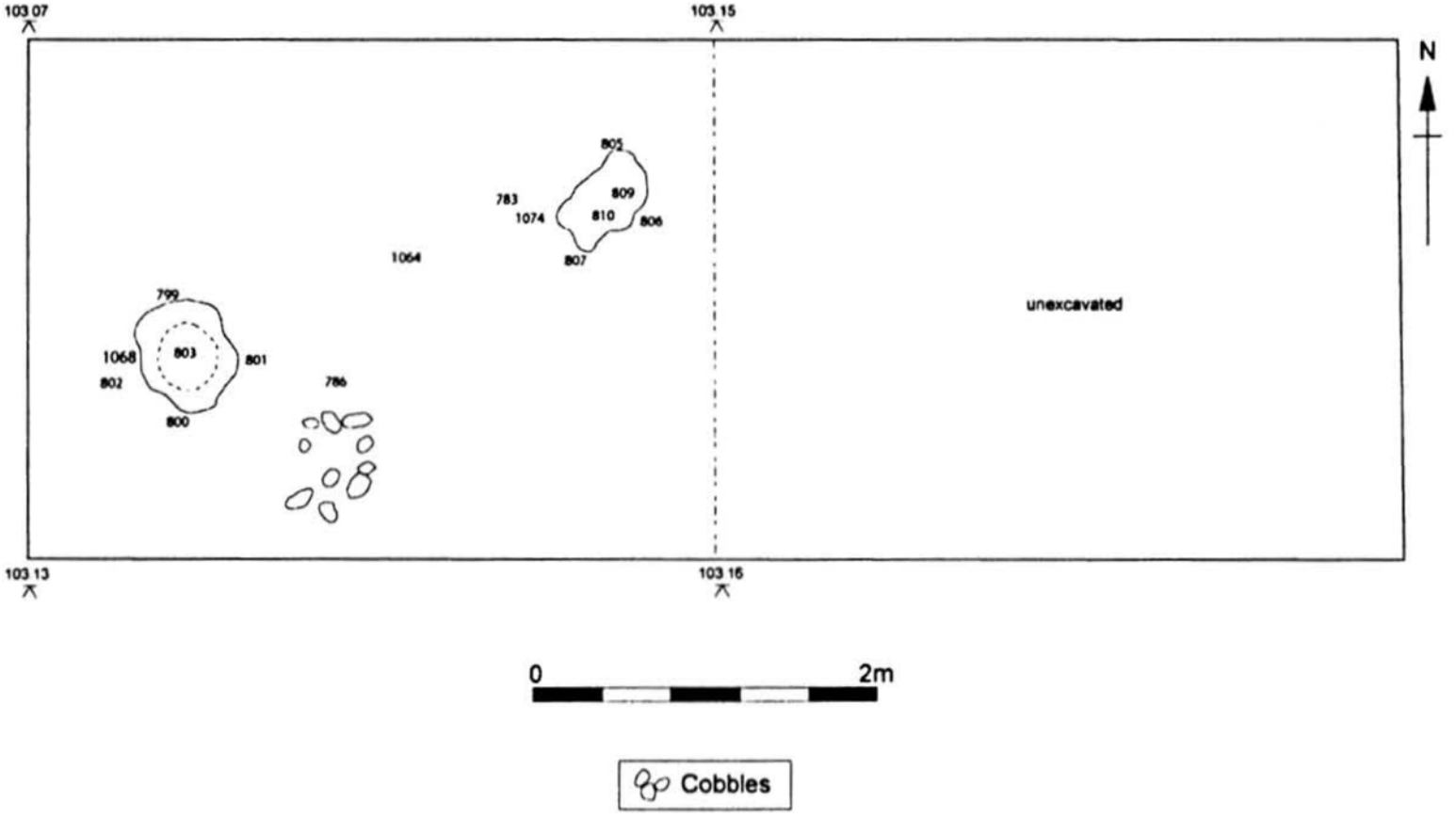


Figure 6.11: Plan of features cut into old land surface 1064 (Phase 8.B)

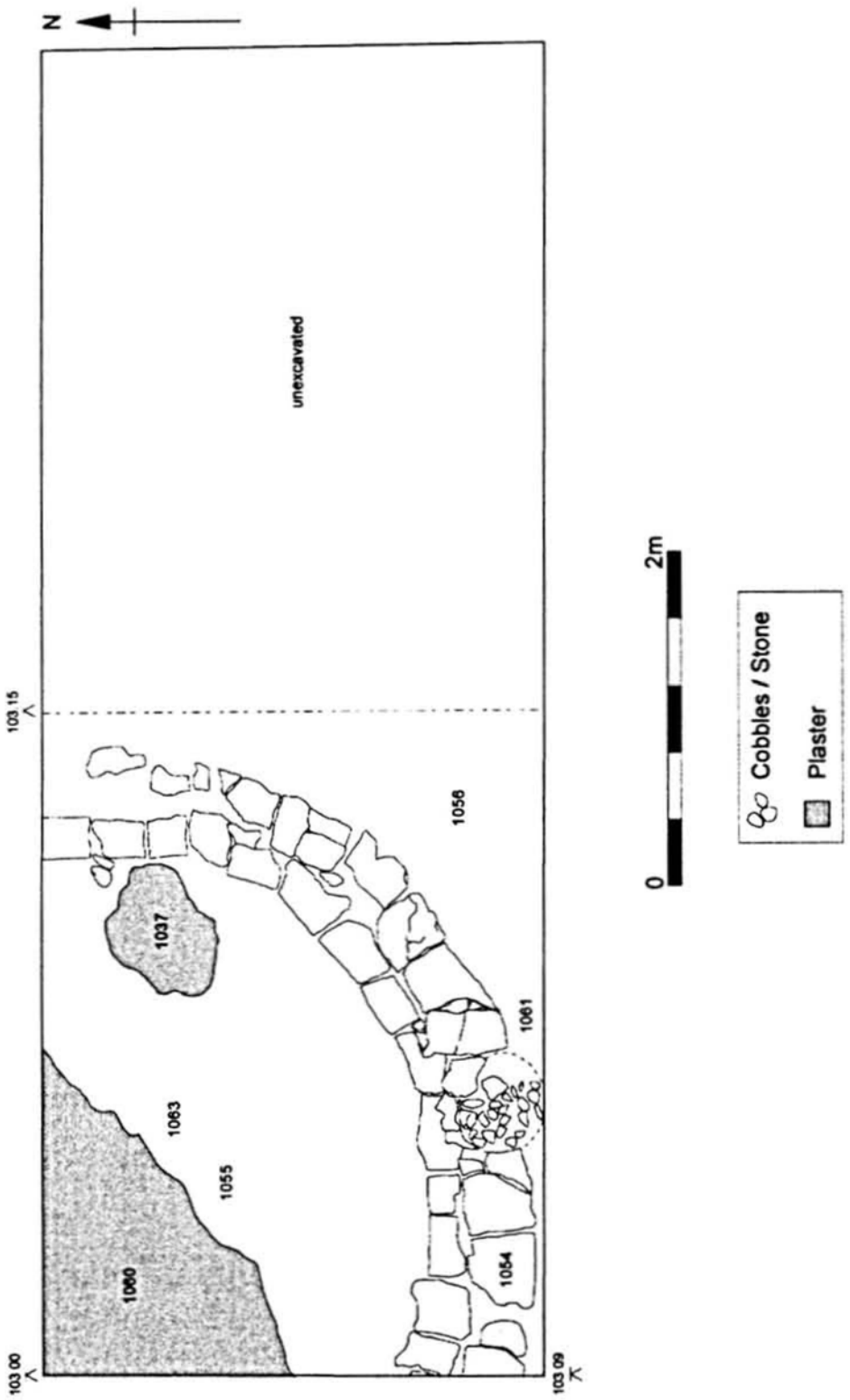


Figure 6.12: Plan of features associated with apsidal mudbrick wall 1054 (Phase 8.C)

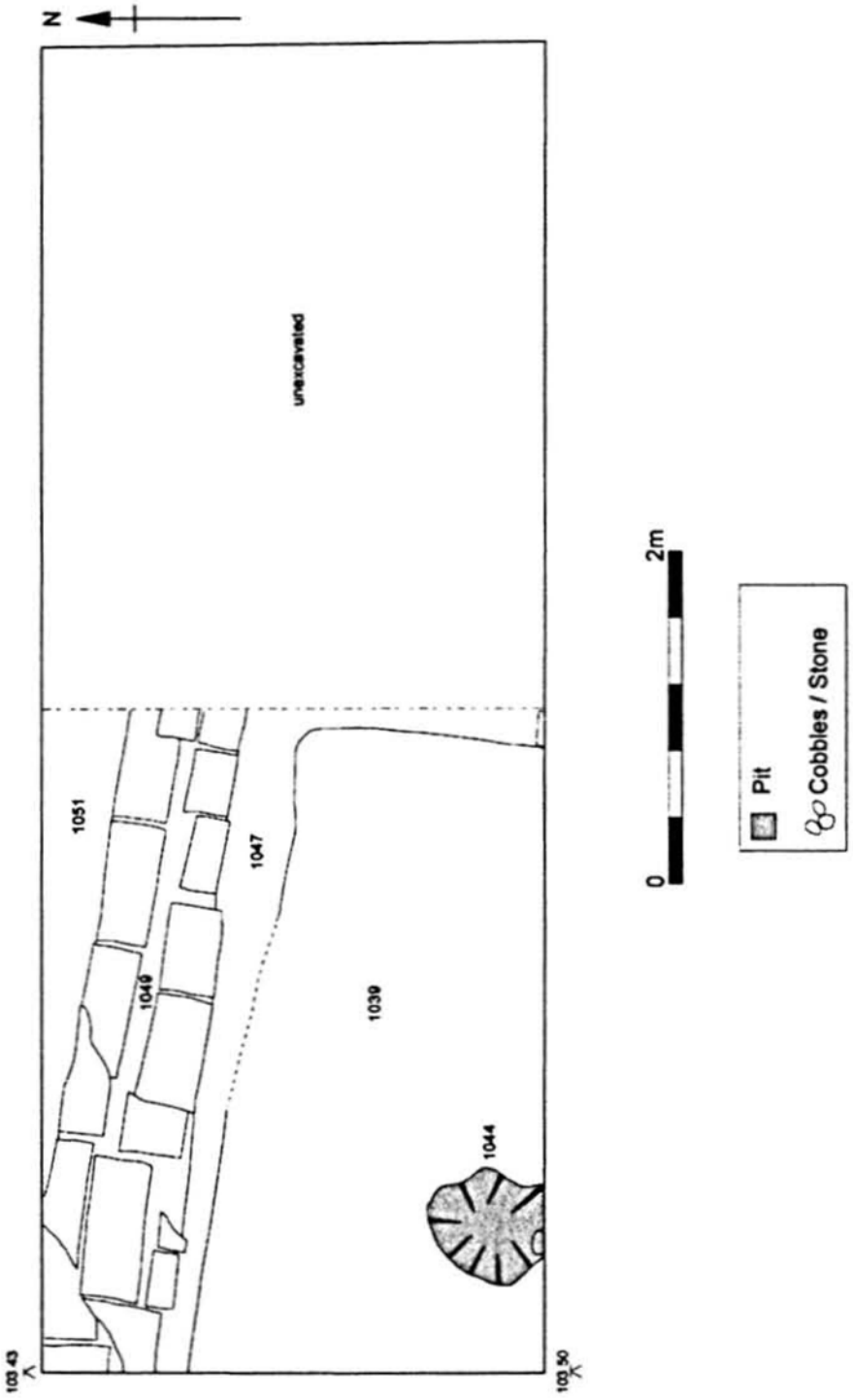


Figure 6.13: Plan of features associated with mudbrick wall 1049 (Phase 8.C)

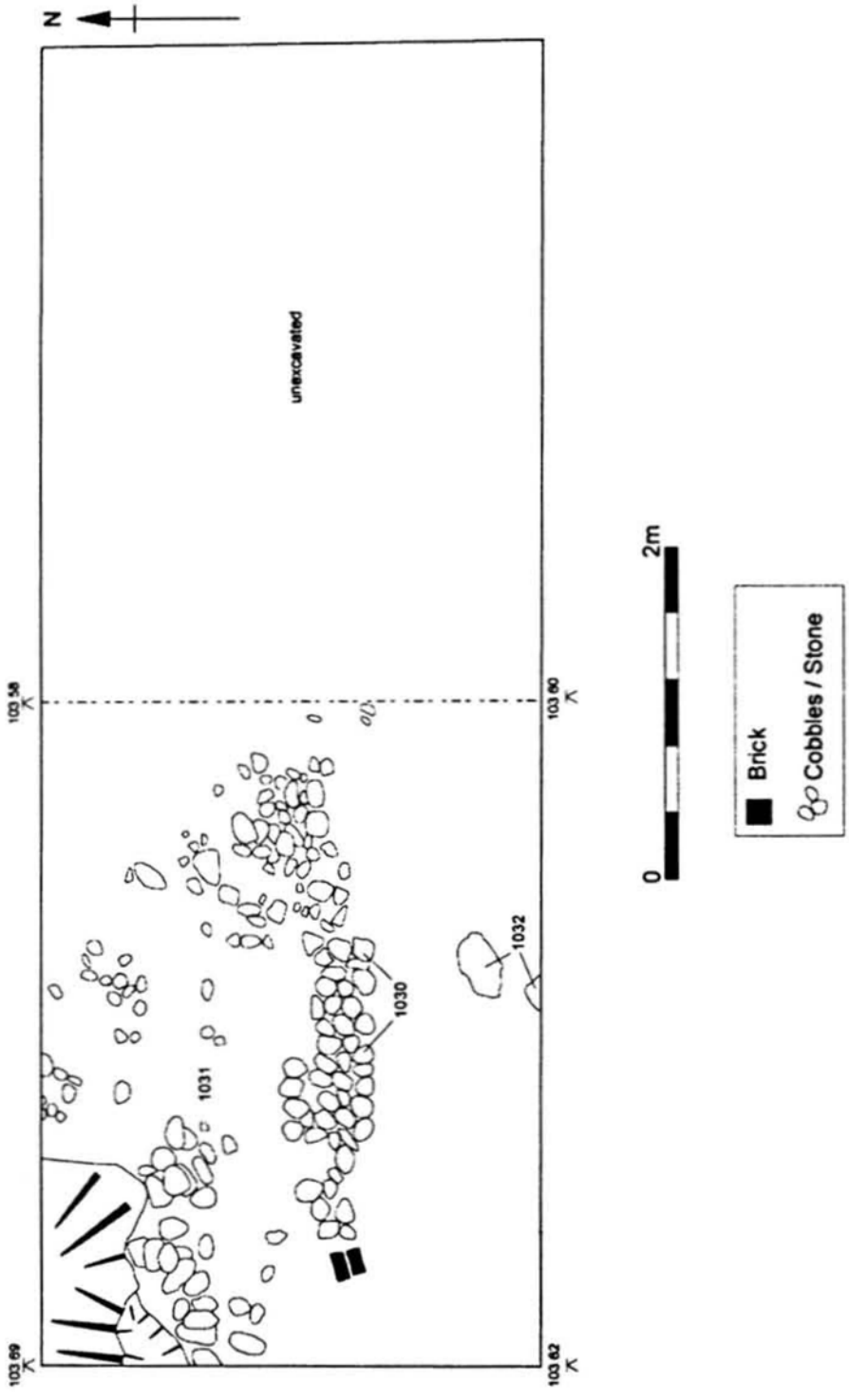


Figure 6.14: Plan of features associated with cobble wall 1030 (Phase 8.D)

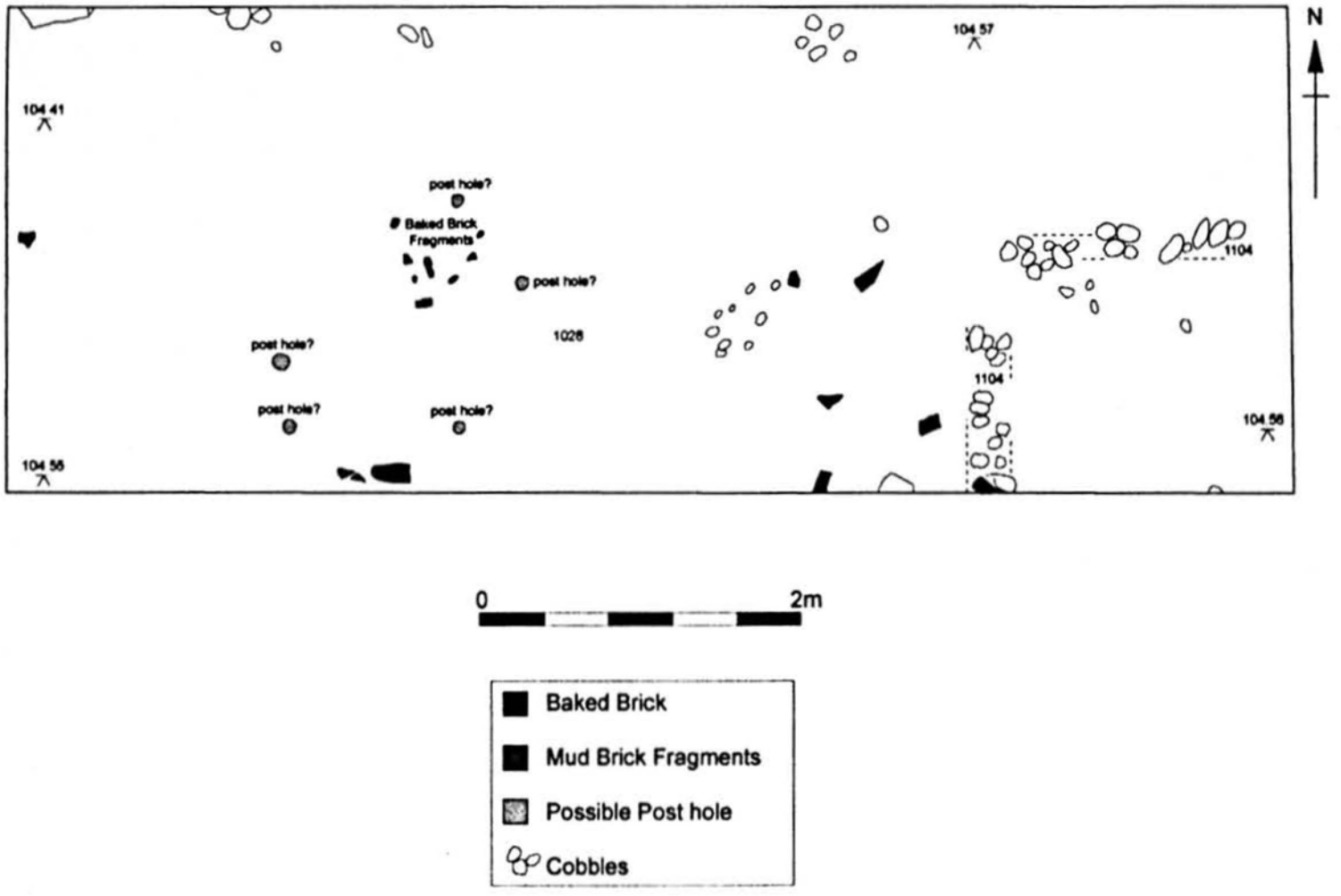


Figure 6.15: Plan of features associated with cobble wall 1104 (Phase 8.D)

Plate 6.1: General view of trench Ch. VIII before cutting of trench Ch. IX to its west

Plate 6.2: View of trenches Ch. VIII & IX looking west

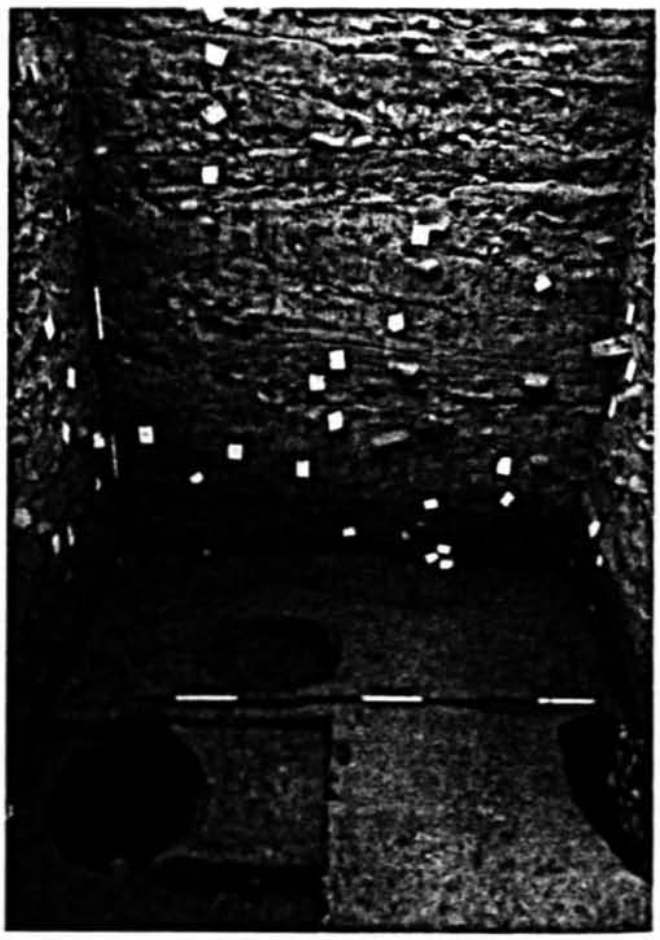


Plate 6.3: View of western section of trench Ch. VIII

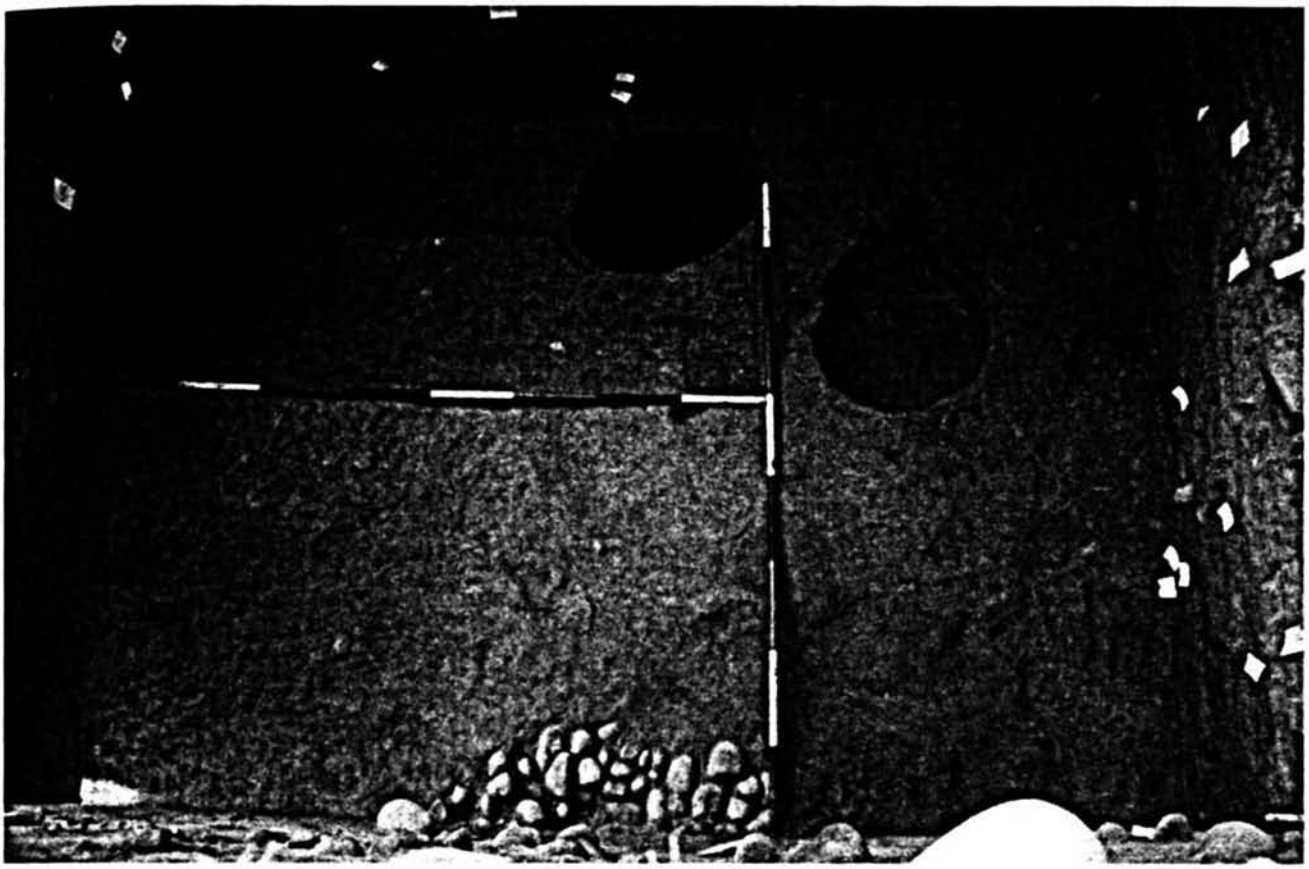


Plate 6.4: View of old land surface 1078 with excavated oven 1083 to right of centre

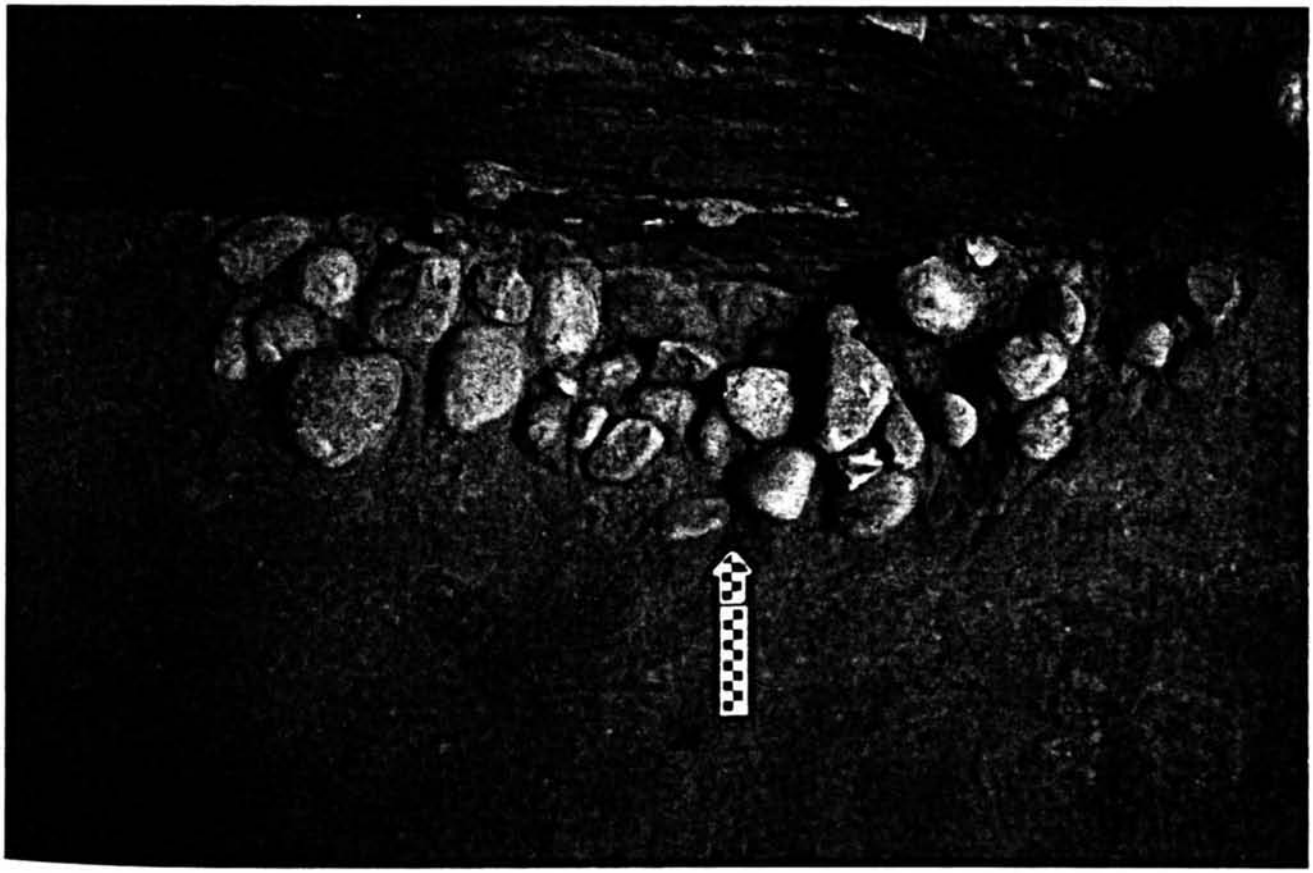


Plate 6.5: Detailed view of cobble-filled pit 1092 before excavation

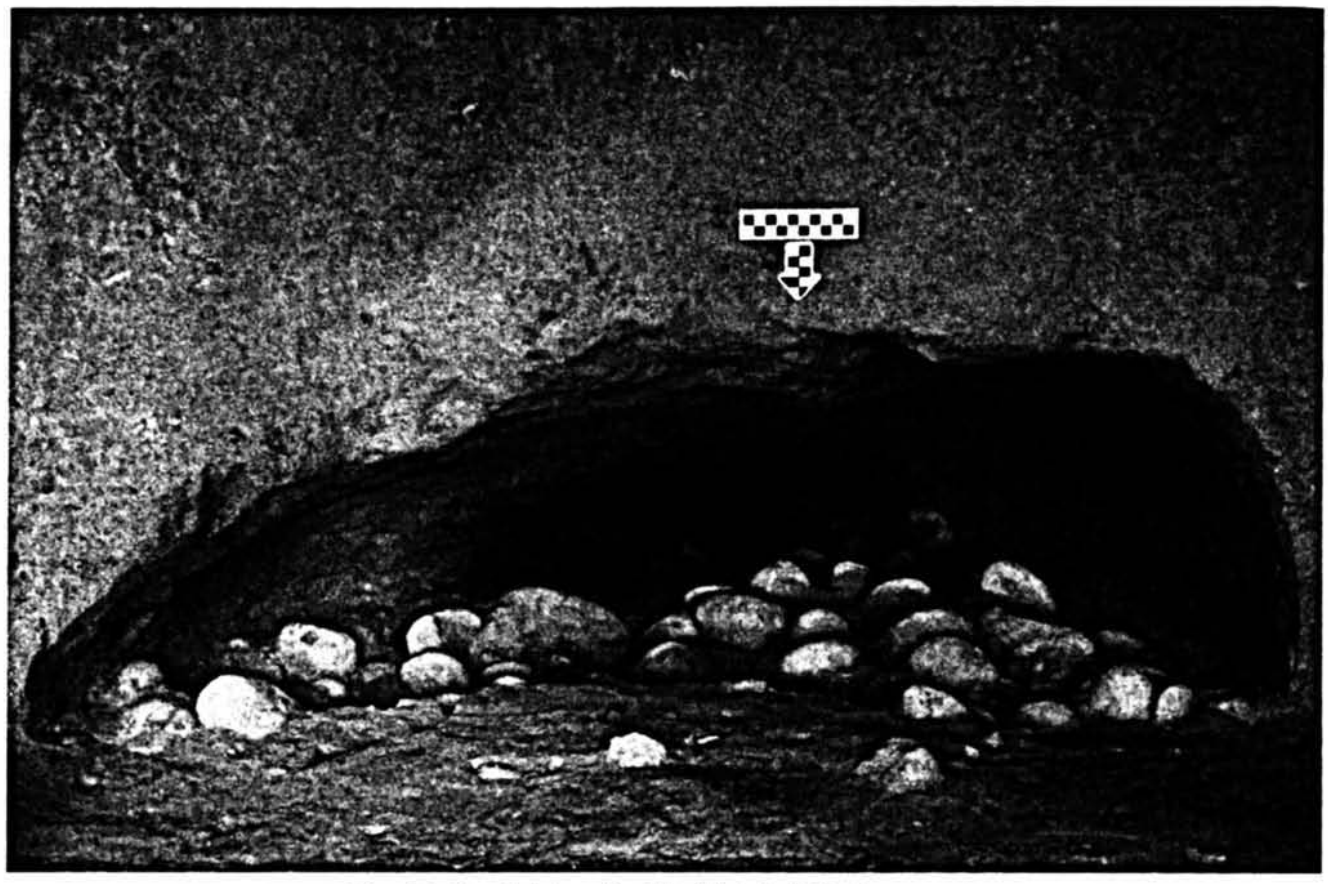


Plate 6.6: Detailed view of cobble-filled pit 1092 after excavation

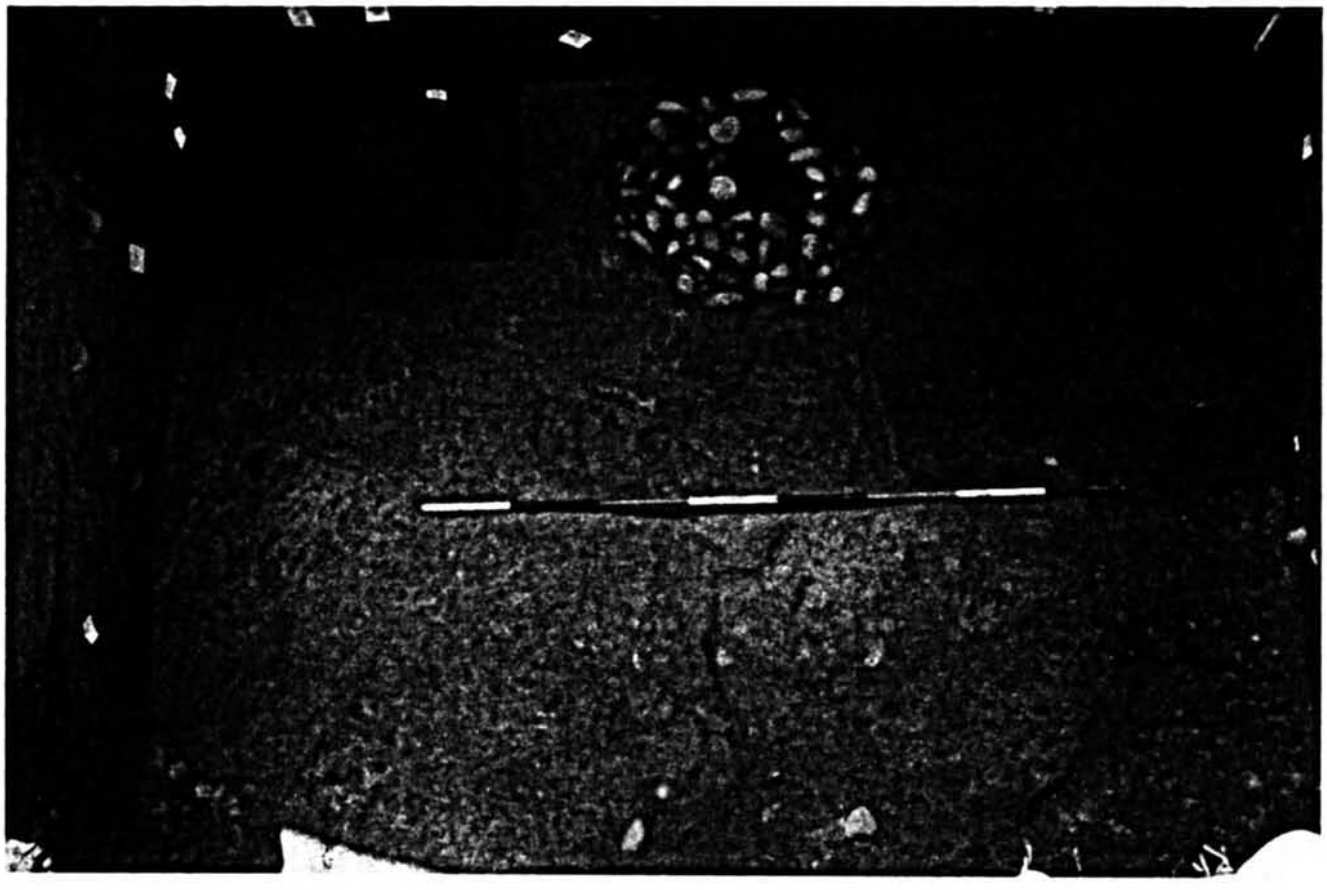


Plate 6.7: View of old land surface 1076 with cobble-filled pit 1070 visible

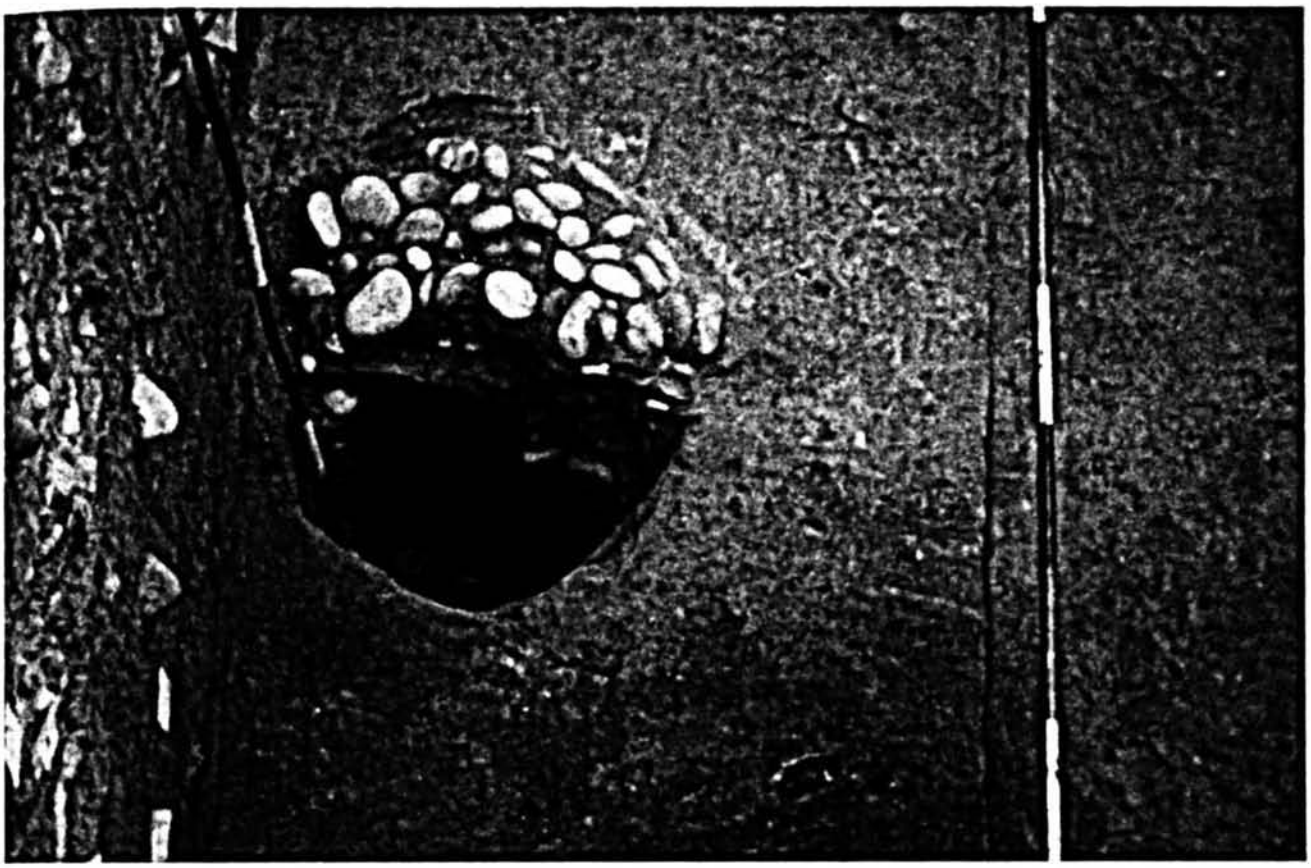


Plate 6.8: Detailed view of half section of cobble-filled pit 1070

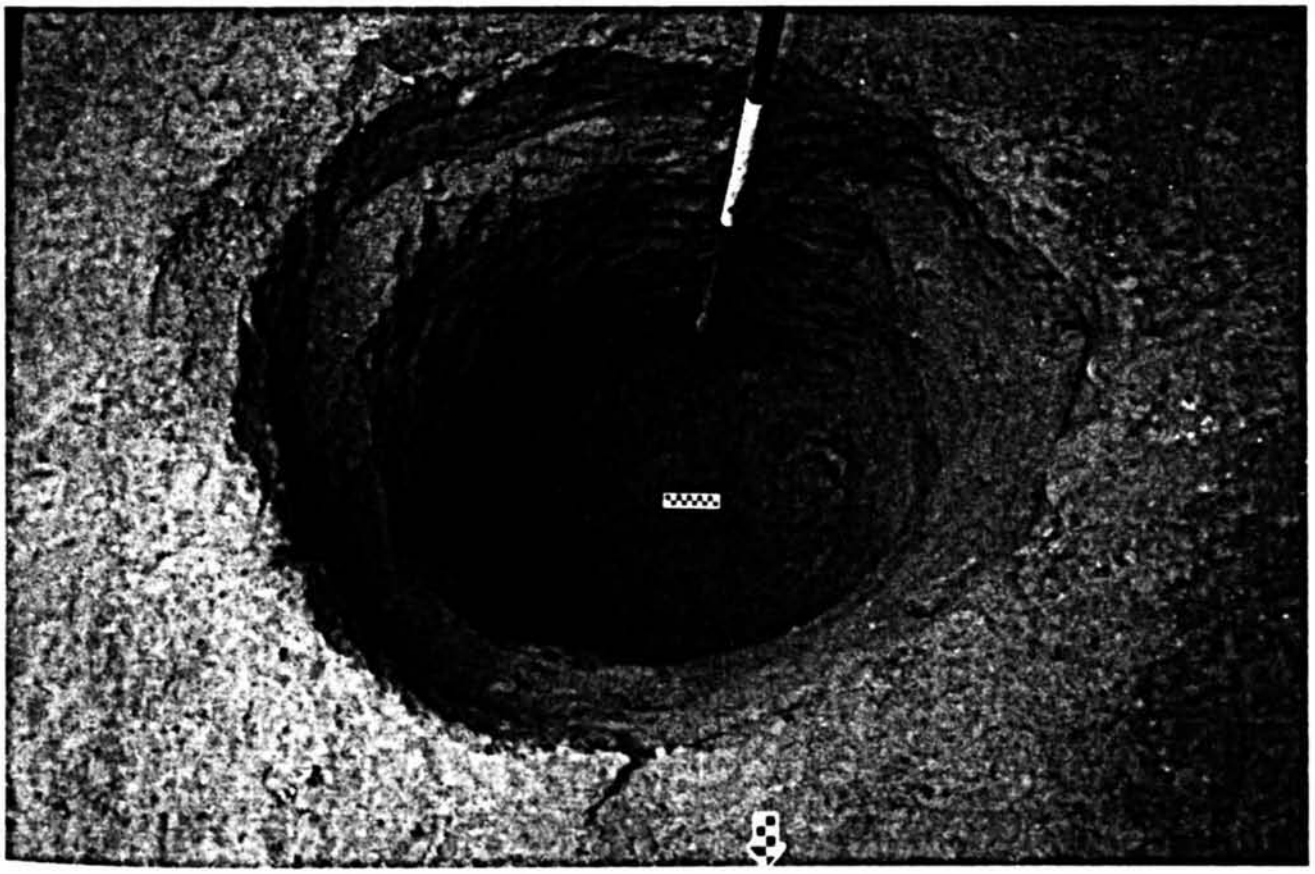


Plate 6.9: Detailed view of cobble-filled pit 1070 after excavation

Plate 6.10: View of cobbles removed from pit 1070

Plate 6.11: Detailed view of hollow in surface of fill of pit 1070

Plate 6.12: General view of old land surface 1064 under excavation

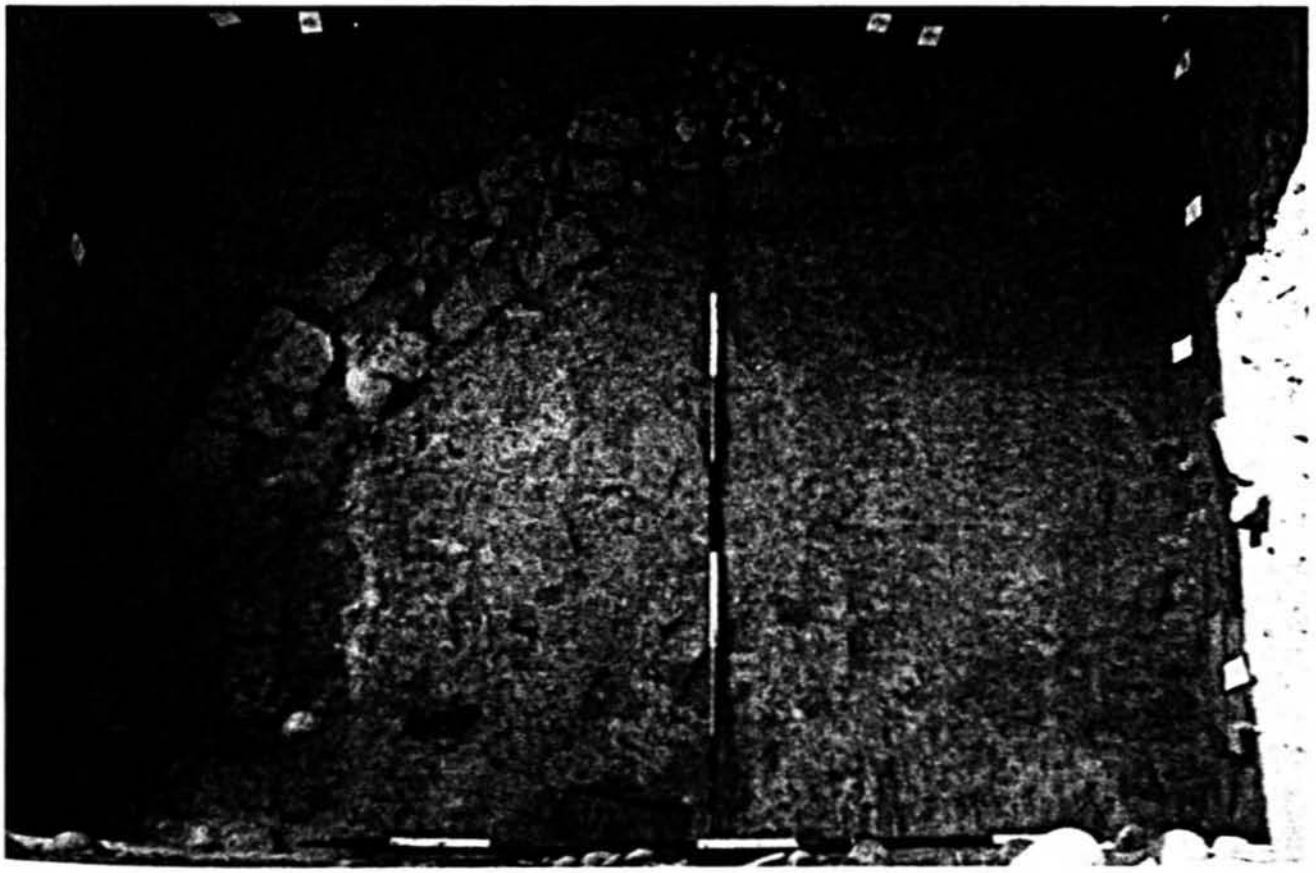


Plate 6.13: View of apsidal wall 1054 before excavation

Plate 6.14: General view of apsidal wall 1054 under excavation

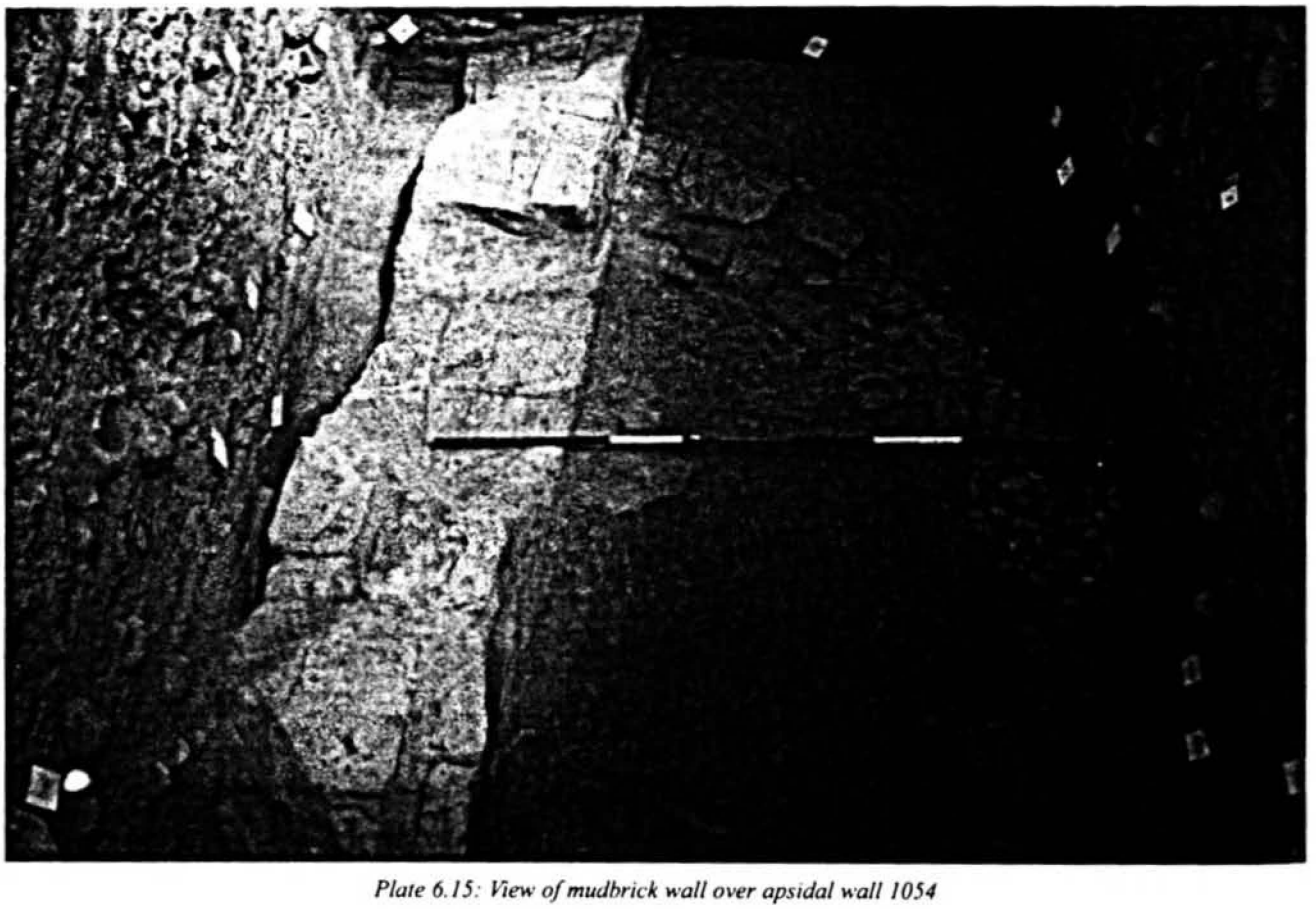


Plate 6.15: View of mudbrick wall over apsidal wall 1054

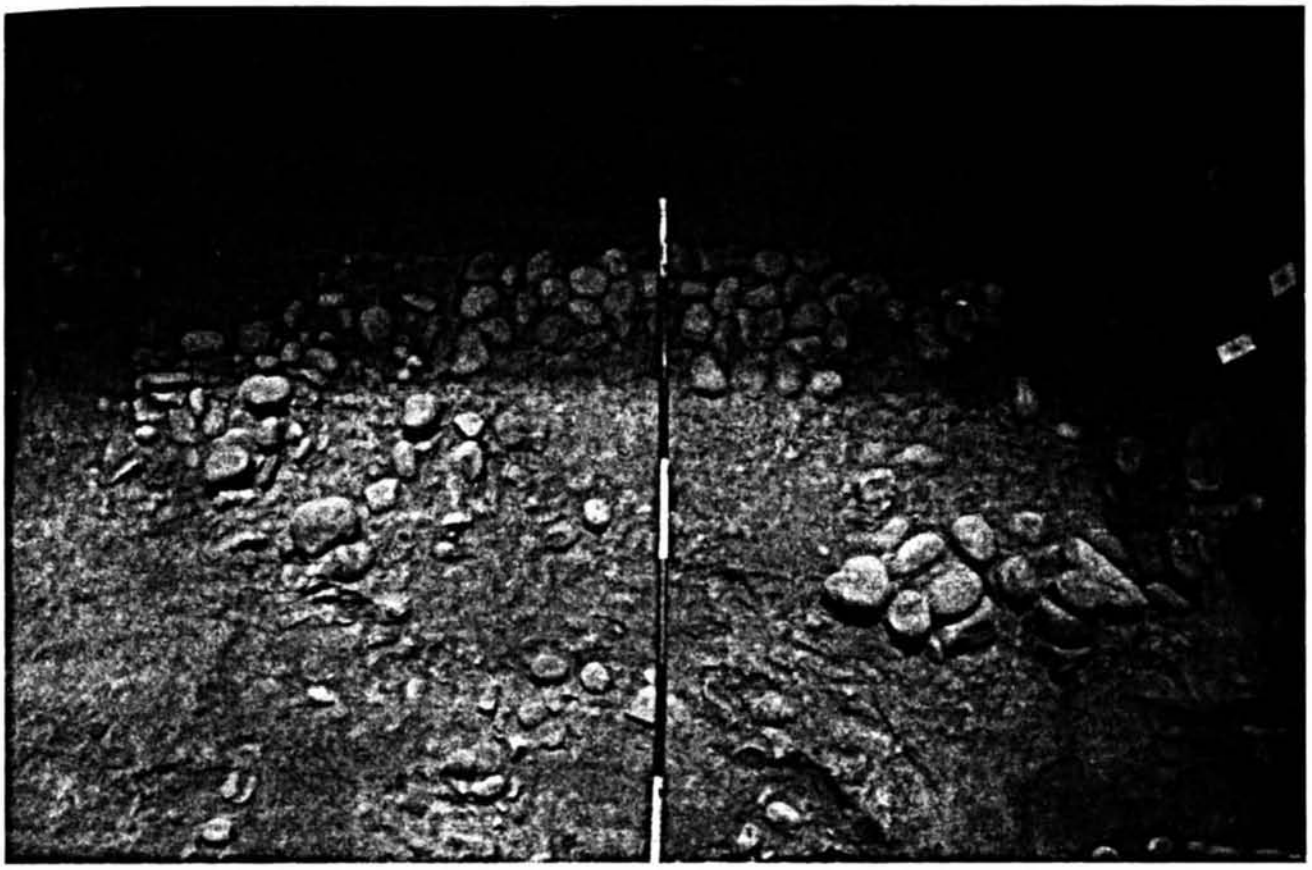


Plate 6.16: View of cobble wall 1030

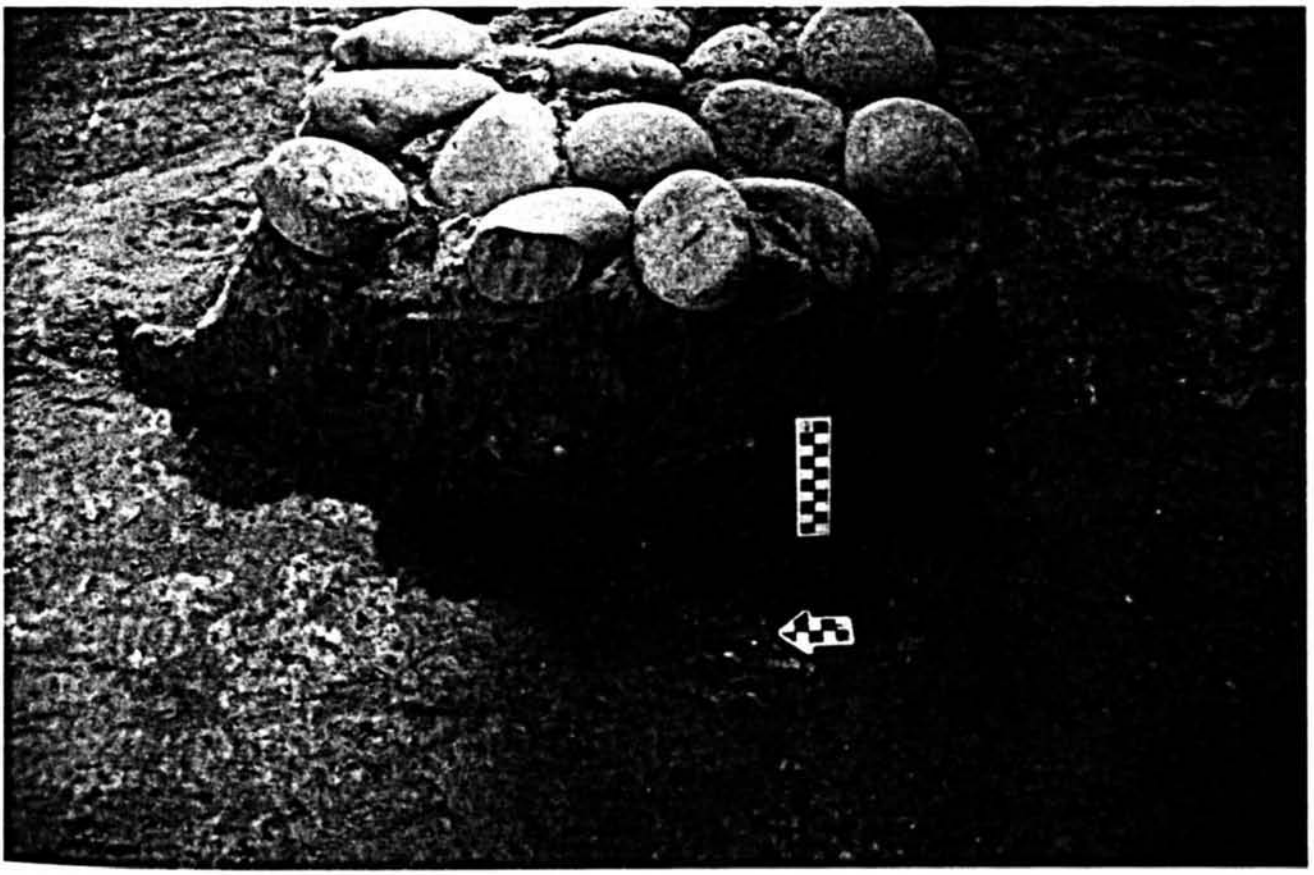


Plate 6.17: View of section through cobble wall 1030

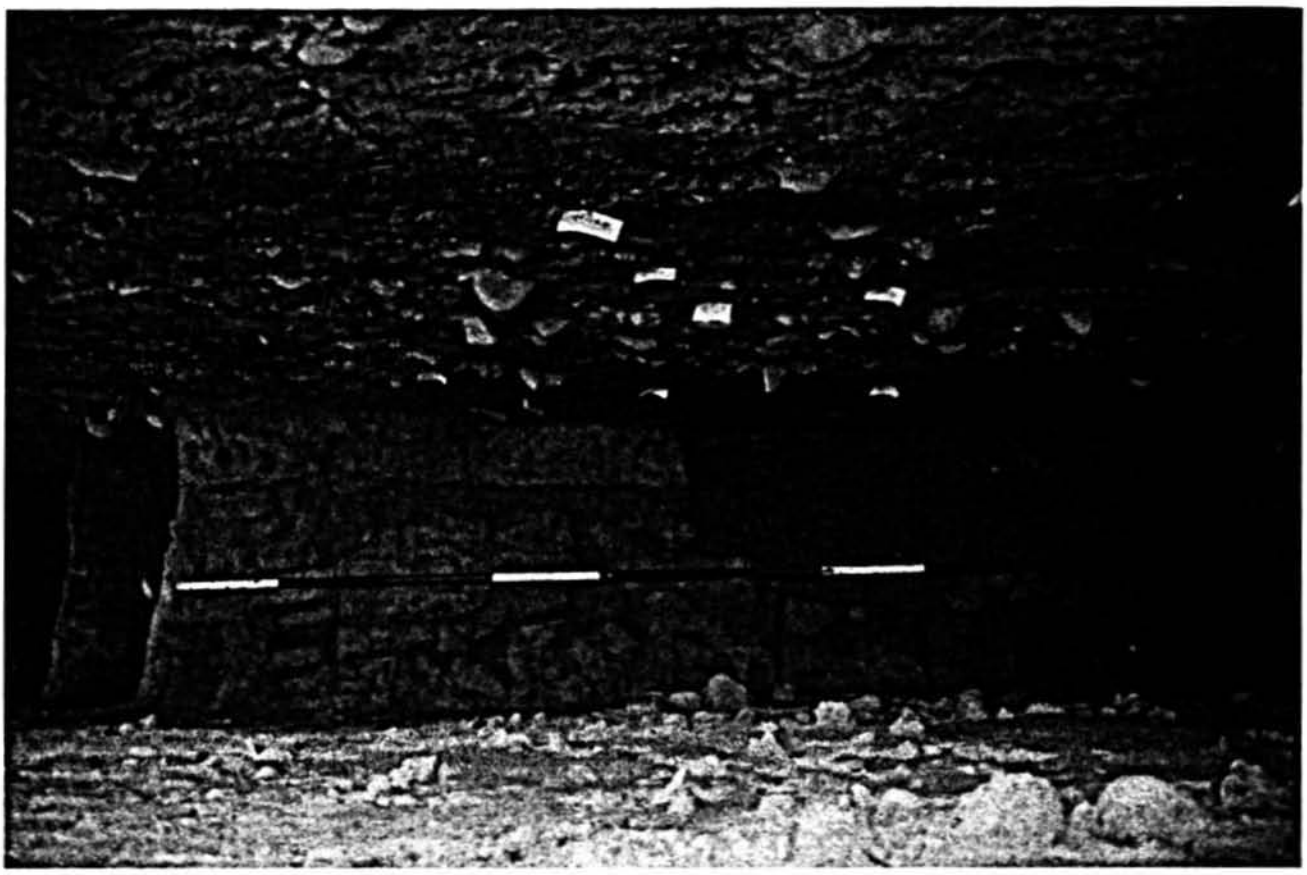


Plate 6.18: Detailed view of major retaining wall 1096 between trenches Ch. VIII & IX

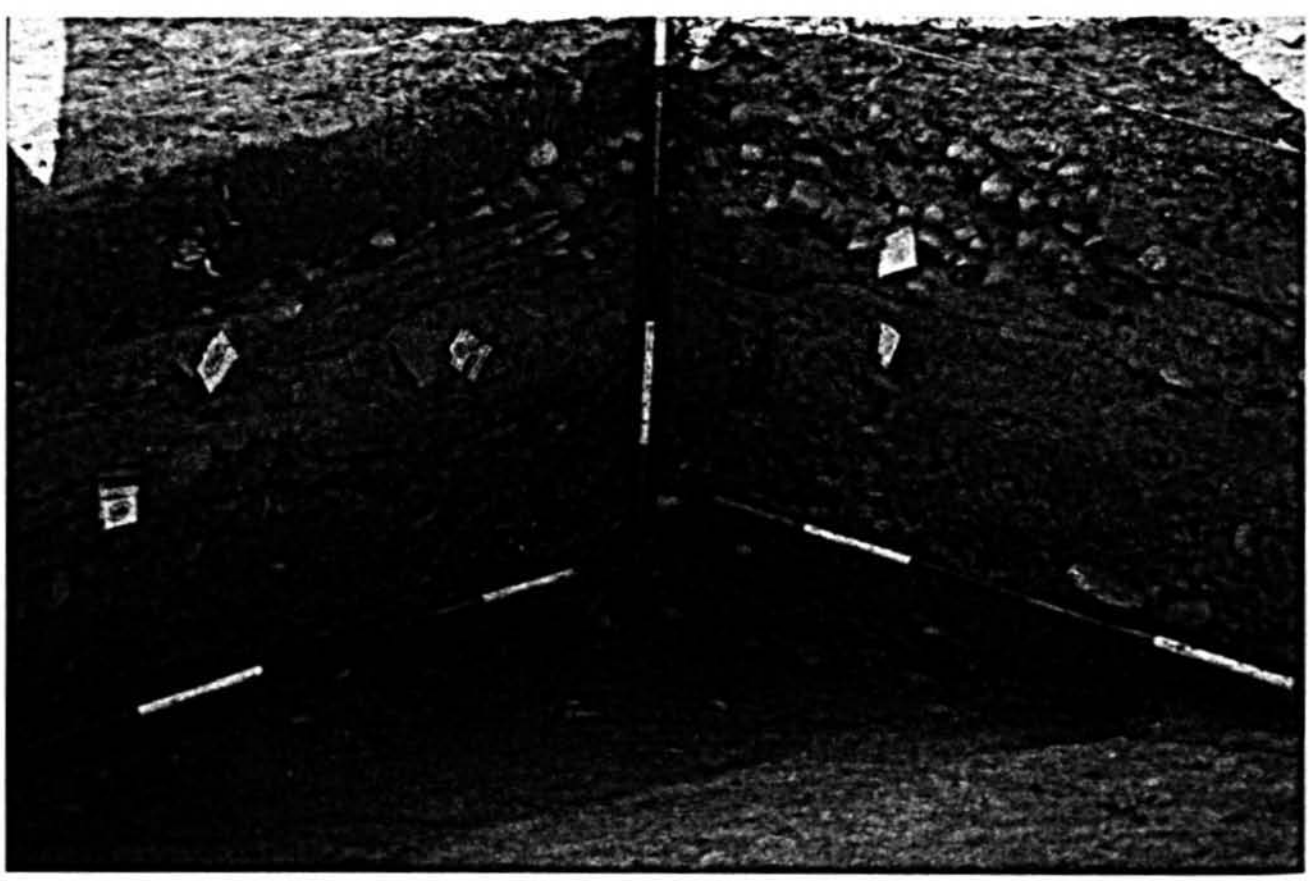


Plate 6.19: View of section through collapse levels of Period V and VI

CHAPTER 7

DATING THE SEQUENCE

Robin Coningham & Cathy Batt

7.1 INTRODUCTION

Sir Mortimer Wheeler based the phasing of his 1958 excavation at the Bala Hisar clearly on the fact that iron objects had been present from the earliest level of occupation in trench Ch. I; as he held that iron had not been known in the subcontinent prior to the expansion of the Achaemenid empire into Gandhara, he suggested that the mound was first established in the 6th century BC (Wheeler 1962: 33). Wheeler then suggested that the ditch and rampart exposed in trench Ch. III could be attributed to the invasion of Alexander the Great in 327 BC (Wheeler 1962: 34). He then provided additional relative dating points in the later sequence through the presence of 'Northern Black Polished Ware', which he dated to between 300 and 150 BC, and Gandharan schist carvings, which he dated to between the 2nd century BC and the 2nd century AD (Wheeler 1962: 35). With this framework constructed, Wheeler then noted that 'Rippled Rims' and Soapy Red Wares' were associated with the lowest occupation at the Bala Hisar, allowing him to construct a syncopated section through the site illustrating its phasing. Thus phased, the artefacts and ceramics recovered were divided into chronological groups with most attention paid to Rippled Rim (c. 550–325 BC), Soapy Red Ware (c. 550–300 BC), Wavy-line Bowls (c. 550–250 BC), dishes with incurved sides (c. 550-110 BC), carinated bowls with links to forms from Hastinapura Period II (c. 550–200 BC), Tulip Bowls (c. 3rd–2nd century BC), Lotus Bowls (c. 3rd century BC), Northern Black Polished Ware (c. 300–150 BC) (Wheeler 1962: 39). Being one of the longest and most fully published artefactual sequences in the region, Wheeler's chronology was soon utilised in order to make sense of newly discovered cemetery sites in the Dir and Swat valleys (Silvi Antonini 1963; Stacul 1966; Dani 1967; Stacul 1967; 1969; Silvi Antonini & Stacul 1972). However, as early as 1977, there were comments that although Wheeler's relative framework was internally and externally consistent, its absolute chronology was too young and did not correspond with radiocarbon dates from the northern valleys allocated to similar materials found in Swat Period V (Stacul & Tusa 1977: 177). These comments were again reiterated by Stacul, who focused on the artefacts in the lowest levels at the Bala Hisar and suggested that 'the date of the deepest archaeological layer of Charsadda is earlier than that previously assumed' (Stacul 1979: 342).

These chronological misgivings were further developed by Tusa, who prepared a comparative chronology for northern Pakistan and allocated the earliest layers of trench Ch. I (50, 47–43 & 39) to c. 1200 BC (Tusa 1979: 680). The acceptance of an earlier date than that proposed by Wheeler was formally integrated into synthetic South Asian archaeology textbooks in 1982 when Allchin & Allchin stated that the Bala Hisar was probably founded 'two or more centuries earlier' than 500 BC (Allchin & Allchin 1982: 314). The dating of the Charsadda sequence was again scrutinised in 1984, when Dittmann provided a chronological chart for North Pakistan based on new relative and absolute frameworks and allocated the lowest layers of Ch. I (51 & 39) to c. 1400–800 BC and layers 33–38 to c. 800–500 BC (Dittmann 1984: Table 5). Dittmann's research prompted Vogelsang to temper his dates by suggesting that 'the date of the earliest levels of Charsada should be brought back to a date at some point during the first half of the first millennium BC' (Vogelsang 1988: 106). Vogelsang subsequently developed a triple-phased model for distinguishing between the ceramics of the early part of the sequence in trench Ch. I (Vogelsang 1992). The earliest ceramic phase was identified as a 'local ceramic assemblage' strongly associated with the Gandharan Grave Culture, in particular, the latter part of its protohistoric sequence (Swat Period V) on account of the presence of Rippled Rim ceramic vessels and vessels of Red Burnished Ware (Vogelsang 1992: 250). He then identified a second ceramic influence through the presence of carinated open bowls, which he termed 'Indic' or 'Gangetic' and dated to 'the (late) first half of the first millennium BC' (Vogelsang 1992: 246, 252). The third phase was defined by the presence of 'western (Aegaeic) ceramics' and include the Tulip Bowl form, the latter dated to after the advent of Alexander (Vogelsang 1992: 246; 1988: 104). Vogelsang then went on to link the first 'local' phase to Swat Period V but suggested that the ceramic traditions of the northern valleys became divergent from the 'Indic' influence of the Vale of Peshawar during Swat Period IV & V (Vogelsang 1992: 250). Despite these efforts to link Charsadda to the chronology and development of the northern valleys, subsequent scholars have chosen to omit it. For example, Dani neglected to comment on the site, its dating or sequence in his synthetic study of 'Pastoral-agricultural tribes of Pakistan in the post-Indus period' (1992) and, more recently, it was not considered in a reconsider-

ation of the relative chronology of the Swat sequence (Vinogradova 2001). The purpose of this chapter is to integrate our radiocarbon dates with the phased occupation of the Bala Hisar and them compare this framework with the dating schemes previously applied to the site. Finally, it should be noted that we have adopted Vinogradova's (2001) relative chronology for the phasing of the Gandharan Grave cemeteries.

7.2 TOWARDS AN ABSOLUTE CHRONOLOGY FOR THE BALA HISAR OF CHARSADDA

As will be clear from the above section, previous attempts to create an absolute chronology for the lower levels of the Bala Hisar of Charsadda have all been reliant on relative regional frameworks. Some of these have attempted to subdivide and date the sequence on account of the presence or absence of iron, thus providing Sir Mortimer Wheeler with a date of around the 6th century BC (Wheeler 1962: 33), but this was disregarded by Vogelsang, who suggested that 'doubts may be cast on Wheeler's statements regarding the early use of iron at Charsadda' (1988: 106). Our own evidence supports Wheeler's identification of iron in early levels and many other South Asian sites have now reported iron at the beginning of the first millennium BC (see Chapter 9). Other scholars have attempted to suggest that as there are more grey wares in the cemetery sites than settlements sites, the former are earlier, however, as noted by Dani, the grey wares and certain forms may just be have been manufactured for funerary contexts (Dani 1967: 40). Similarly, there is considerable debate as to the date of certain forms as illustrated by the discussion surrounding the 'Tulip Cup' (see Chapter 8). Wheeler allocated this form to between the 2nd and 3rd centuries BC (Wheeler 1962: 40), but Dittmann has suggested a pre-Achaemenid date (Dittmann 1984: 172) and Vogelsang a post-Achaemenid one (1988: 104). This pattern is further complicated by the apparent presence of a similar form amongst the assemblage of the early part of Period II at Hastinapura, but its profile is unmistakable (Lal 1955: 49, no. XXXVIa). Painted Grey ware example no. 49, also from Period II, may also be attributed to this form (Lal 1955: 41) and form C2 shares similarities with examples from Qal'ah-i Nau, an Achaemenid site in Sistan (Scerrato 1962: Fig. 13, no.13–15). The following sections will discuss the stratigraphic and structure sequence of each trench, identifying both relative frameworks and absolute chronology. For ease of use, it should be noted that we have followed Stacul's Ghalegai sequence wherever possible in order to avoid the complexities of multiple terminologies, as illustrated by Dani's Gandharan Grave Culture Period I (Dani 1992: 405) representing the same period as Stacul's Swat Period V (Stacul 1969).

Having first defined our relative periodisation at the Bala Hisar of Charsadda (Table 7.1), we then utilised the 13 radiocarbon determinations to provide an absolute framework for the site (Table 7.2). The AMS and conventional radiocarbon measurements were carried out on either charcoal or bone by the Oxford Research Laboratory for Art History and Archaeology, and the Rijks Universiteit, Groningen. In addition to the radiocarbon determinations, there were stratigraphic records from which the relationships between the contexts and their assorted radiocarbon samples could be determined. Initial calibration of the radiocarbon determinations was carried out using OxCal V2.18 (Bronk Ramsey 1995), based on the internationally agreed calibration curve of Stuiver and Reimer (1993) and the radiocarbon ages are shown in Table 7.2. When looking at the initial probability distributions of the calibrated dates from the Bala Hisar, a number of effects were evident. The dates were earlier than the radiocarbon determinations; in some cases the radiocarbon calibration resulted in multiple ranges at the two and, more commonly, the one standard deviation confidence levels; and the age range was increased (Figure 7.1).

In order to utilise the radiocarbon determinations to their full extent, use was made of the calibration and analysis program OxCal (Bronk Ramsey 1995). The radiocarbon determinations for the Bala Hisar of Charsadda were interpreted using OxCal, taking into account the stratigraphic information available; namely that contexts were in simple stratigraphic order and that material used in the radiocarbon determinations was securely from within the phases to which the dates are attributed, but could be from any date or sequence within that phase. The archaeological evidence supported this interpretation being recovered from sealed contexts with little evidence of bioturbation (Table 7.1). The probability distributions which are generated when taking into account the chronological model are shown in Figure 7.2. It can be seen that the stratigraphic information serves to constrain the calibrated dates to much narrower ranges. The percentages are an index of how well the chronological model agrees with the dating evidence; in some cases the agreement is better than expected and is greater than 100%, in other cases it is poorer. It should be noted that on the basis of the stratigraphic evidence it appears that three samples are later than is consistent with their position in the stratigraphy. This may indicate that the material sampled was later, intrusive material and these samples were omitted from subsequent analysis.

7.3 TRENCH CH. VIII/IX

As noted in Chapter 6, trench Ch. VIII/IX was excavated in order to resolve the nature and date of the earliest occupation at the Bala Hisar of Charsadda.

7.3.1 Phase 8.A

At a depth of 4.5 metres below the present land surface, Phase 8.A consists of two old land surfaces containing fragments of ceramics, bone and charcoal flecks resting on the natural clay mound which underlies the site. Later features included postholes and an oven, and one radiocarbon measurement was taken from earliest old land surface 1094 (GrN-22545) but may have been intrusive as it is slightly later than the three samples above. These samples suggest that the earliest occupation of the site has a *terminus ante quem* of between c. 1420 and 1120 BC. The earliest diagnostic material recovered from the site comprised one rim of Rippled Rim and three rims of straight-sided

beakers of Red Burnished Ware, all from the trampled upper surface of natural clay context 1099. Context 1078, an old land surface sealing 1094, yielded the solid stem of a pedestaled vessel of Red Burnished Ware, with very clear burnishing marks down its length.

7.3.2 Phase 8.B

The structures of Phase II.B are somewhat enigmatic, comprising a small number of shallow pit features and two large river cobble-filled pits. The two pit cuts (1091 & 1070) are very similar and measure some 1m in depth and 1m in diameter. Both are entirely filled with river cobbles, 781 in the case of completely excavated 1070, and are assumed to have functioned as foundation pits for timber pillars or pasts although we have limited regional analogies. Two radiocarbon measurements were taken on material from this phase, one from old land surface 1077 (GrA8359), which sealed the contexts of Phase 8.B and one (OxA-9938) from the fill (1073) of a pit cut into a later old land surface (1064). Context 1077 also yielded sherds of globular-sided beakers of Red Burnished Ware as well as two decorated sherds of coarse red ware, one with black paint and the other with the impression of a geometric stamp. Fill 1092, fill of the cobble-filled pit 1091, contained three fragments of a white glass spherical bead (Sf 1131) and although this find of glass may be early, the material has also been encountered in Period III of the occupation at Balambat with a date of between the beginning and first quarter of the first millennium BC (Dani 1967: 239). Old land surface yielded a damaged example of the category of ridged terracotta biconical beads with decoration of circular and fingernail impressions (Sf 1075). This category has close affinities with examples (termed spindle-whorls) from the cemetery at Loebanr (Silvi Antonini & Stacul 1972: 36) and is attributed to Phase IA of the Swat Graveyard chronology of Vindogradova (2001: Fig. 4 no. 19 & 20). The old land surface also yielded a terracotta example of Wheeler's category of 'asymmetrical beehive-shaped beads' (Sf 1051), which again has affinities with examples (termed spindle-whorls) from the cemetery at Loebanr (Silvi Antonini & Stacul 1972: 36) and which are attributed to Phase IIA of the Swat Graveyards by Vindogradova (2001: Fig. 6, no. 65). The radiocarbon ages of measured samples from this phase suggest that it was occupied between c. 1420 and 1090 BC.

7.3.3 Phase 8.C

The structures of Phase 8.C are associated with the use of large clay slabs, devoid of cultural inclusions and probably representing the quarrying of the edges of the natural clay mound underlying the Bala Hisar of Charsadda. One of the most striking of the structures encountered in trench Ch. VIII/IX was the apsidal building as defined by wall trench 1102. Built of clay slabs, it measured at least 5m wide and had a distinct apse of circular eastern end. As noted in Section 6.4, such structures are usually later associated with religious practices, especially Buddhism (Coningham 2001: 75), however, this structure may also be linked to the circular-ended building of rubble at Balambat (Dani 1967). Two radiocarbon measurements were taken from Phase 8.C, one of these (GrA-8358) was from the fill of pit cut 1061, itself cut into the wall (1054). The second (GrN-22543) was recovered from context 1045, the fill of an oven cut into a successive building on the site. Unfortunately the radiocarbon determination suggested that this latter sample was of later intrusive material. However, the measurement of GrA-8358 links closely to those from Phases 8.B and 8.D and suggests that the apsidal structure was erected between c. 1250 and 1040 BC. Context 1055 represented the foundations of the apsidal building and yielded a single example of Wheeler's category of shallow, flat-bottomed dishes with roughly vertical but convex sides with inturned upper ends (Wheeler 1962: 40). It is identified by Vogelsang as part of an 'Indic' tradition which he suggested penetrated the northern valleys in the middle of the first millennium BC (Vogelsand 1992: 246). This single sherd is undoubtedly in an early context and most of the other examples of this form were recovered in Phase 8.D. Context 1052, belonging to the second sub-phase of structures, yielded a sherd of Black/Grey Burnished Ware carved into an anthropomorphic figure with extremely close links to a similar figure from Period III of Balambat (Dani 1967: Plate LIVb, no.8), although anthropomorphic figures carved from bone have also been recovered from both Katelai and Loebanr (Silvi Antonini & Stacul 1972: Plate LIII, nos. a & b) but placed within Period IIB of Vindogradova's relative chronology of the Swat Graveyards (2001: Fig. 7, no. 14). Context 1051, also part of the second sub-phase of construction yielded a bone barrel-shaped bead (Sf 965), circular in cross-section and chamfered at both ends. One of the final contexts of this phase, plaster floor 1039 yielded a single example of a vessel lug with a finger impression in its centre, identified by Giorgio Stacul as part of the new assemblage of Swat Period VII (Stacul 1995: 124), although lugs have also been recovered from the cemetery of Loebanr (Silvi Antonini & Stacul 1972: Fig. 6, no. a) and are attributed to phase IB of the Swat Graveyards by Vindogradova (2001: Fig. 5, no. 5).

7.3.4 Phase 8.D

As noted in Section 6.5, Phase 8.D of Trench Ch. VIII/IX was the final in-situ occupation of the trench and was mainly characterised by the construction of structures defined by foundation slots filled with river cobbles (contexts 1030 & 1104). This period also saw the construction of a major wall of mudbrick (1096), set within a mud mortar and measuring at least 2.25m wide and over 0.5m high. It may represent the construction of a major revetment or terrace, retaining the higher cultural deposits to the west of trench Ch. VIII/IX. Two radiocarbon measurements were taken one from early foundation/old land surface 1031 (OxA-9835) and one from lense 1032 (OxA-9939), associated with a rectangular structure with cobble-filled foundation slots. These samples indicate that the structures of Phase 8.D were built between c. 1160 and 890 BC. Context 1040 is associated with the early structure and yielded a single sherd of the category of carinated bowls with everted rim, which Wheeler cited as having clear

links with similar carinated bowls from Hastinapura Period II (Wheeler 1962: 40). Again, they are identified as part of the intrusive 'Indic' tradition and dated to the middle of the first millennium BC by Vogelsang (Vogelsand 1992: 246). An additional member of the 'Indic' tradition is represented by the example of Wheeler's category of shallow, flat-bottomed dishes with roughly vertical sides with rounded upper ends and was found in context 1037. Context 1021, one of the uppermost 'in-situ' levels of Period II.D, yielded two sherds of Tulip bowls. Dated by Wheeler to the 3rd and 2nd centuries BC (Wheeler 1962: 40), there is still controversy as to its date with Dittman suggesting a pre-Achaemenid date (Dittmann 1984: 172) and Vogelsang a post-Achaemenid one (Vogelsang 1988: 104) although, to some extent, form C2 is similar to examples from Qal'ah-i Nau, an Achaemenid site in Sistan (Scerrato 1962: Fig. 13, no. 13–15). The context also yielded an eroded terracotta animal body (Sf 922), coated with a dark brown slip. Animal figurines are known from the corpus of artefacts from the Gandharan Grave cemeteries, with Zarif Karuna yielding no fewer than 11 examples (Khan 1973: 58).

7.4 TRENCH CH. VI

As noted in Chapter 5, trench Ch. VI was excavated in order to obtain carbon samples for dating Wheeler's 'Alexandrian' ditch as well as confirming its course.

7.4.1 Phase 6.a (cut 61)

Cut 61 was located at the eastern edge of trench Ch. VI, close to the edge of the natural clay mound underlying the Bala Hisar of Charsadda. A single radiocarbon sample (GrA-5246) was recovered from within fill 60, with a calibrated date of between 1220 and 1020 BC. A number of the artefacts from its contexts relate well to Vogelsang's Gandharan cultural tradition (Vogelsang 1992: 246). For example, Context 57 yielded Red Burnished Ware, including part of a pedestaled vessel and 18 undiagnostic sherds (680g), together with 12 sherds of Rippled Rim; context 60 yielded four undiagnostic sherds of Red Burnished Ware (120g), 8 sherds of Rippled Rim; and context 62 yielded a fiddle-shaped terracotta female figurine (Sf 344). As discussed in Chapter 12, this type is absent from Vindogradova's relative chronologies for the Swat Graveyards (2001) and has many unique features, but it has some analogies with examples from Loebanr (Silvi Antonini & Stacul 1972: Plate LI, no. d). However, these regional traits were augmented by evidence of Vogelsang's 'Indic' flavour as illustrated by context 57, which contained two sherds of 'Indic' carinated bowls with everted rim and a sherd from an 'Indic' dish base, and context 60 one sherd from an 'Indic' shallow, flat-bottomed dish with roughly vertical but convex sides with rounded upper ends. Special finds of a glass bead and a terracotta ridged biconical bead with zigzag pattern (Sf 326) were also recovered from context 57. No evidence of Vogelsang's third influence, the western or 'Aegaeic' assemblage (1992: 246), was found in the fills of the cut. The presence of these elements strongly links this feature with Phase 8.C of trench Ch. VIII.

7.4.2 Phase 6.b (wall melt 71)

Wall melt 71 is one of the most challenging contexts as it appears to have been preserved 'in-situ' but contains materials from all three of Vogelsang's cultural impulses or waves, the Gandharan Grave Culture, the 'Indic' and the 'western' (Vogelsang 1992: 246). Moreover, although it is isolated stratigraphically, it has yielded a carbon sample (GrA-4210), which was calibrated to between 1140 and 890 and BC. The Gandharan influence is quite clear with finds of Red Burnished Ware, including three sherds of straight-sided beakers, four beaker bases, part of a cup, four pedestals, one bowl on stand and 76 undiagnostic sherds (2510g); the single 'in-situ' undiagnostic sherd of Black/Grey Burnished Ware (12.4g); and 10 sherds of Rippled Rim. This assemblage is then augmented by vessels of an 'Indic' nature, such as one sherd of an 'Indic' carinated bowl with everted rim and a sherd from an 'Indic' shallow, flat-bottomed dish with roughly vertical but convex sides with inturned upper ends. Finally, Vogelsang's western or 'Aegaeic' assemblage (1992: 246) is represented by a single sherd from a 'Tulip Bowl' and by two sherds from small bowls/lamps with incurved rims. As noted above, there is some disagreement concerning the dating of 'Tulip Bowls', as the form does have analogies with examples in Period II of Hastinapura (Lal 1955: 49, no. XXXVIa). Additional late elements include two pierced lugs and one spout fragment, although Vinogradova has identified the former in Period IB of the Gandharan Grave Culture (Vinogradova 2001: 17, no. 23), although spouts are part of its final phase (Vinogradova 2001: 21, no. 16). The two glass bangle fragments could be part of an earlier assemblage as this material has been recovered from Balambat Period III (Dani 1967: 239). The presence of two sherds of bowl or lamp G2 is also interesting as this form was allocated a late date by Wheeler (Wheeler 1962: 60), although its presence at Qal'ah-i Nau suggests an Achaemenid date (Scerrato 1962: Fig. 15, no. 6). The presence of these elements strongly link this feature with Phase 8.D of trench Ch. VIII.

7.4.3 Phase 6.c (ditch cut 55)

Ditch cut 55 is stratigraphically later than cut 61 but has an ambiguous relationship with wall melt 71. Two radiocarbon samples were recovered from this feature, one from fill 73 (GrA-5247) within the upper part of the ditch and one from fill 80 – the basal fill of cut 55 (GrA-5250) – both date to the middle of the first millennium BC (c. 790–450 BC), but the latter would appear to be out of stratigraphic position. Evidence of Vogelsang's local flavour or influence was found within the fills with part of a Red Burnished Ware bowl on stand and two undiagnostic sherds of 'Red Burnished Ware' from context 66 as well as a 'Single Holed Sickle' of schist and a fragmentary terracotta animal figurine. Similarly, context 67 yielded some Red Burnished Ware: one sherd of a globular-sided beaker, a sherd of a cup, a sherd of a bowl on stand; context 73 a sherd of Rippled Rim; and context 80 a sherd of Rippled Rim and a terracotta animal figurine fragment. Evidence of the 'Indic' horizon was also present in the ditch cut 55 with two sherds of 'Indic' carinated bowls

with everted rims in context 66; an 'Indic' carinated bowl with everted rim from context 67; an 'Indic' carinated bowl with everted rim; three sherds from an 'Indic' shallow, flat-bottomed dishes with roughly vertical but convex sides with rounded upper ends and a sherd from an 'Indic' dish base from context 72. Context 71 also yielded an example of form O5, a grooved bowl with inturned rim, dated by Wheeler to the 2nd century BC (Wheeler 1962: 67) only found elsewhere within the fill of Ch. III's ditch cut 2, dating to site Period III. Examples of bowl/lamp form G2 were also recovered from contexts 66, 79 and 80, a form only found in context 71, although termed long lived by Wheeler (Wheeler 1962: 60). These artefacts indicate that the feature belongs to site Period III.

7.5 TRENCH CH. III

Trench Ch. III was excavated by Wheeler in 1958 and in 1994 it was reopened. We recovered a small amount of material from a recut of Wheeler's V-profile ditch (renamed ditch cut 2) and also from the postholes of the 'Postern Gate' (Wheeler 1962). As discussed in Section 5.2, the exact stratigraphic relationship between these two features is unclear but an overlap is indicated by radiocarbon measurements taken from material from postholes 139 (GrA-4219) and from the fills of the extension of the ditch (55) in Trench Ch. VI (GrA-5247 & GrA-5250).

7.5.1 Phase 3.a (ditch cut 2)

The fills of ditch cut 2 have been interpreted as part of a fairly tight chronological framework and are assumed to be dated to around the middle of the first millennium BC on account of the radiocarbon measurements in trench Ch. VI (GrA-5247 & GrA-5250). One of the upper fills, context 15, confirmed the feature's younger character by yielding a sherd from an 'Indic' shallow, flat-bottomed dish with roughly vertical but convex sides with inturned upper ends – an example was also found in context 32 - as well as a sherd from a 'Tulip Bowl' and a pierced lug also in 15. Additional late features included a spout from context 17, another pierced lug from low down in the ditch in context 34 as well as early sherds of Red Burnished ware throughout in contexts 25, 27, 28, 32, 47 and 38. Context 30 yielded two sherds from an 'Indic' dish base, and context 32 a late example of grooved bowl with inturned rim (form 05) as well as a damaged terracotta ridged biconical beads (Sf 530) and a terracotta beehive-shaped bead. Combined these artefacts suggest that there is a high degree of residuality within this feature and that the feature belongs firmly within site Period III.

7.5.2 Phase 3.a (postern gate/postholes)

A radiocarbon measurement from the fill of posthole 139 (GrA-4219) dates to the middle of the first millennium BC, between c. 770 and 350 BC, although the postern's artefacts are undiagnostic with the exception of a terracotta animal figurine sherd from context 104.

7.6 TRENCH CH. VII

As noted in Section 5.4, trench Ch. VII relates to a large wall, measuring at least 10m wide and 8m high, in a large erosion gully on the eastern side of the mound at a depth of 6m below the summit's surface. We have interpreted this feature as a defensive or retaining wall.

7.6.1 Phase 7.A (mudbrick wall)

Context 998 comprised a thick layer of charcoal sealing mudbrick elevation wall 999, and sample GrN-21831 provided a calibrated date of between 80 and 220 AD. It was not possible to reduce the date range for this sample using Bayesian methods as it was significantly separated in time from the other measurements. We recovered few cultural objects from this feature and nothing diagnostic.

7.7 CONCLUSION

In Chapter 1, we identified our project aim as the study of the nature of the origins and development of the early sequence of the Bala Hisar. This aim was supported by the following objectives. Firstly, to provide a chronometrically dated artefact and ceramic typology for the Bala Hisar's lowest levels; secondly, to provide a chronometrically dated structural typology for the Bala Hisar's lowest levels; thirdly, to provide material correlates for the initial occupation of the mound, allowing the creation of a chronological model for the emergence of urban forms in South Asia; and fourthly, to compare the phased development of the settlement at Charsadda with that of other sites within the region. By linking the excavated features and artefacts from our trenches at the Bala Hisar of Charsadda with their absolute chronology, we are able to achieve our objectives and aim. Indeed, the following nine chapters are dedicated to discussing the recovered artefacts, their dates and their local and regional affinities (Table 17.1). We are now able to confirm that the Bala Hisar of Charsadda was first occupied in c. 1400 BC, when a small community was established on a low natural mound of clay standing above the floodplain of the Kabul and Swat rivers. Initially constructing structures of timber posts slotted into postholes, clay slabs were used later for the building of more substantial structures. These initial phases of occupation have been grouped within Period II, Period I representing the accumulation of the original natural clay mound. During this period a number of features were also cut into the eastern edges of the mound, including perhaps a defining or fortification ditch. Linked to a regional cultural pattern emanating from the valleys to the north, a later 'Indic' influence is discernable around the first millennium BC. As already noted by Vogelsang, this 'Indic' or rather Gangetic influence is then joined by a western or 'Aegaeic' by the middle of the first millennium BC. A fortification complex of wall and ditch is superimposed on earlier features marking the eastern edge of the natural clay mound during Period III in the middle of the first millennium BC. Our final in-situ evidence is of a massive retaining wall being built c. 2nd–3rd century AD but our later archaeology is unclear as the levels of Period V & VI are very mixed, however, as noted in Chapter 13, there is evidence of occupation between the 11th/12th and the 18th centuries AD.

Trench	Context	Period	Sample Reference	Radiocarbon age	Sample material	Archaeological context
III	140	III	GrA-4219	2370+/-60 BP	Bone	fill of posthole 139
VI	73	III	GrA-5247	2460+/-50 BP	Bone	upper fill of ditch cut 55
VI	80	III	GrA-5250	1430+/-50 BP	Bone	basal fill of ditch cut 55
VI	71	II (D)	GrA-4210	2870+/-60 BP	Bone	within mudbrick wall 71
VI	60	II (C)	GrA-5246	2900+/-50 BP	Bone	fill of ditch cut 61
VII	998	IV	GrN-21831	1870+/-20 BP	Charcoal	cutting back from elevation
VIII	1032	II (D)	OxA-9939	2860+/-55 BP	Bone	old land surface
VIII	1031	II (D)	OxA-9835	2908+/-38 BP	Bone	old land surface
VIII	1045	II (C)	GrN-22543	2340+/-90 BP	Charcoal	fill of oven cut 1044
VIII	1062	II (C)	GrA-8358	2930+/-50 BP	Bone	fill of pit cut 1061
VIII	1073	II (B)	OxA-9938	2920+/-50 BP	Bone	fill of pit cut 1074
VIII	1077	II (B)	GrA-8359	3060+/-60 BP	Bone	old land surface
VIII	1094	II (A)	GrN-22545	2750+/-110 BP	Bone	old land surface

Table 7.1: Samples selected for radiocarbon dating

Sample Ref.	Radiocarbon age (BP)	Calibrated Age (95% confidence)	Calibrated Age using Bayesian inference (95% confidence)	Agreement with stratigraphic model
GrA-4219	2370±60	760BC-680BC (13.3%)	770BC-680BC (40.3%)	76.7%
		670BC-350BC (82.1%)	670BC-380BC (55.1%)	
GrA-5247	2460±50	770BC-400BC	790BC-450BC	101.0%
GrA-5250	1430±50	530AD-680BC	Omitted from analysis	0%
GrA-4210	2870±60	1260BC-900BC	1140BC-890BC	109.9%
GrA-5246	2900±50	1260BC-970BC (92.2%)	1220BC-1020BC	110.5%
		960BC-930BC (3.2%)		
GrN-21831	1870±20	70AD-220AD	Omitted from analysis as significant elapsed time from other dates	
OxA-9939	2860±55	1220BC-890BC	1110BC-890BC	108.5%
OxA-9835	2908±38	1260BC-980BC	1160BC-980BC	110.7%
GrN-22543	2340±90	800BC-200BC	Omitted from analysis.	0%
GrA-8358	2930±50	1310BC-980BC	1250BC-1040BC	116.9%
OxA-9938	2920±50	1300BC-970BC	1300BC-1090BC	91.1%
GrA-8359	3060±60	1450BC-1120BC	1420BC-1160BC	99.8%
GrN-22545	2750±110	1300BC-750BC (93.6%)	Omitted from analysis	0.9%
		700BC-550BC (1.8%)		

Table 7.2: Radiocarbon ages of measured samples

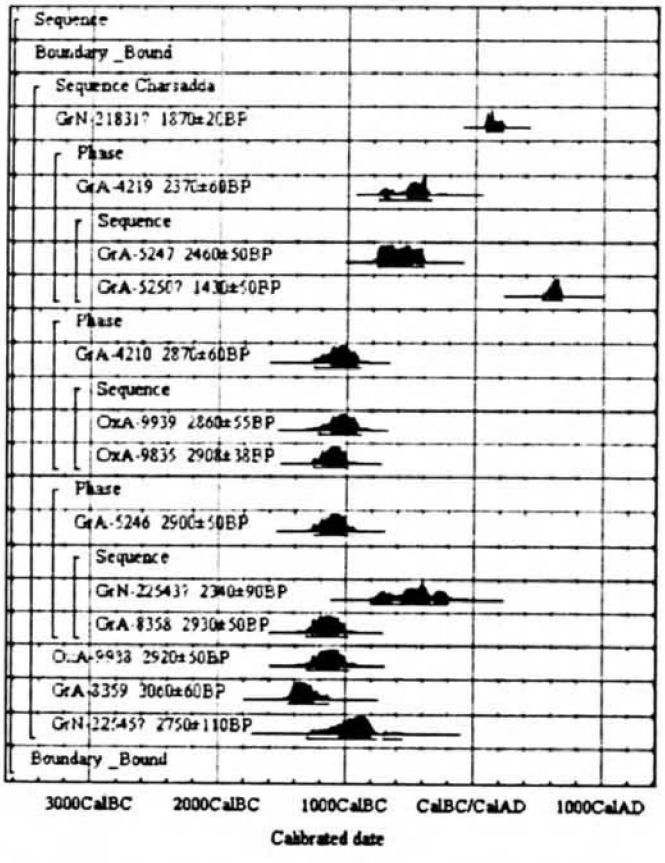


Figure 7.1: Initial probability distributions of the calibrated dates from the Bala Hisar of Charsadda

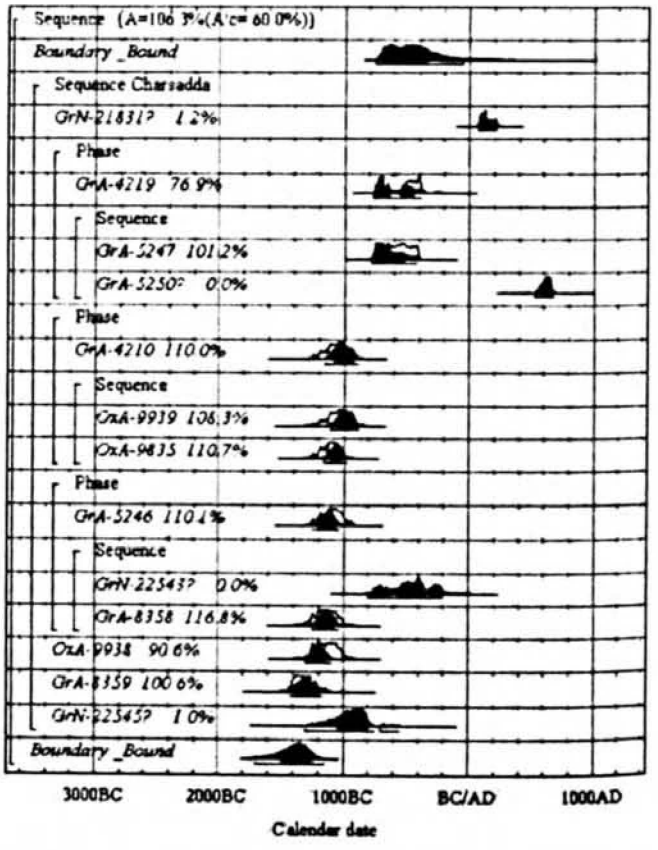


Figure 7.2: Radiocarbon determinations from the Bala Hisar of Charsadda using OxCal

CHAPTER 8

THE UNGLAZED CERAMIC OBJECTS

Robin Coningham, Ihsan Ali & Muhammad Naeem

8.1 INTRODUCTION

A total of 70,240 unglazed ceramic objects, mainly pottery sherds, were recovered from trenches Ch. III, VI and VIII/IX at the Bala Hisar of Charsadda, weighing a total of 2803kg. These comprised 346 fine ware sherds and objects (14.9kg), 5226 diagnostic coarse ware sherds and objects (249.3kg) and 64,618 undiagnostic pottery sherds (1731kg) (Table 8.1). An additional weight of 806kg of bricks was also recovered, although their number was not counted as many were tiny fragments. This chapter has been divided into two main sections, fine wares and coarse with further sub-divisions within. Generally speaking, our differentiation between fine and coarse wares is based on sherd texture, that is, the size of the grains within the ceramic paste utilised. We have accordingly adopted Shepard's petrological definition that fine wares include grains that are between 1/4–1/8mm in diameter, whilst medium wares are between 1/2–1/4mm and coarse wares are anything above 1/2mm (Shepard 1965: 118). As Wheeler's 1962 published typology for Charsadda has been widely utilised by other scholars (Silvi Antonini & Stacul 1972; Dittmann 1984; Vogelsang 1988), we have used many of his definitions although note that some of his categories appear to have been based on wares, such as 'Soapy Red Ware' and 'Northern Black Polished Ware', and others on decoration, such as Rippled Rim, and others on combinations of form and decoration, such as 'Wavy-Line Bowls' (Wheeler 1962: 37–41). We have retained many of these categories, as we are aware that they are very recognisable and are easily applied to sherds in the field, allowing a very clear and quick reference for scholars working in adjacent areas. Where necessary, we have expanded or augmented Wheeler's catalogue, for example changing Wheeler's term 'Soapy Red Ware' (Wheeler 1962: 39) to Allchin's more widely applied Red Burnished Ware (Allchin 1982).

It should be noted that the accompanying illustrations provide adequate descriptive clarity in themselves and the written descriptions are merely supplementary; only the salient differentiating features will be highlighted. Where vessel forms are discussed, these forms are clustered around the five basic classes of bowls, beakers, pots, jars and dishes with the addition of bases, lids, lugs and handles, miscellaneous and modified sherds, lamps, votive tanks, potters' konoras, vessels with potters' marks and inscriptions, and decorated body sherds. Following Cunliffe's definitions, bowls have heights usually less than maximum diameters; rim diameters may be in excess of maximum body diameters (Cunliffe 1984: 232). Jars are held to have heights usually in excess of maximum diameters; rim diameters usually less than maximum body diameters. Dishes have heights less than maximum diameters; maximum diameter usually at rim and pots have heights approximately equal to diameter; rim diameter approximately equal to base diameters. As noted in the catalogue of ceramics from Anuradhapura (Coningham 2006), all categories are based on variability, and variability in ceramic forms was prevalent in antiquity, and the reasons for this have been diverse (Miller 1985: 1–5). They include technological and social factors as recorded by ethnoarchaeological and archaeological observations (ibid.) but variation can also exist due to the amount of potters and workshops involved in the production of the same type of vessels and therefore a greater range of skills, techniques and resources (Sinopoli 1988: 593). One of the social aspects involves the needs and wants of the consumer, such as the Hopi of north-east Arizona, who only produce variations in pottery form on demand (Stanislawski & Stanislawski 1978: 213–216). Most worryingly, variability can be identified within a form or ware that has been produced by a single potter as evidenced by ethnoarchaeological studies (Miller 1985: 41–42). This suggests that the morphological measurements taken by archaeologists are not necessarily an accurate distinguishing feature of different pottery types (ibid: 43). Pottery classification systems are therefore difficult to formulate without knowledge of the potters' behaviour, skill, and cultural context. As a result of this, pottery classifications are best served through 'lumping' together sherds with similar attributes, such as rim shape. 'Splitting' could create extra types that may be archaeologically insignificant and therefore produce misleading interpretations. Finally, as will be evident from the individual variant and form catalogue entries below, there are numerous variants and forms, which are extremely useful in terms of chronological or temporal differentiation as already indicated in Chapter 7. Finally, it should be noted that some forms and variants may appear to be missing from the lists (e.g. M); this is due to early splitting followed by an amalgamation with another group.

8.2 THE FINE WARES

When Sir Mortimer Wheeler excavated the Bala Hisar of Charsadda in 1958, he identified four main types of fine

ware vessels: Soapy Red Ware vessels, Wavy-Line Bowls, Lotus Bowls and Northern Black Polished Ware (Wheeler 1962: 39–46). Only one of these groups was recovered from the in-situ levels excavated during the recent field-work at the Bala Hisar, Soapy Red Ware (referred to as Red Burnished Ware in the present volume), but it is augmented by a fine ware unrecorded by Wheeler, Black/Grey Burnished Ware with clear affinities in the northern valleys. Examples of Northern Black Polished Ware, Fine Black Slipped and Red Slipped Wares (Lotus Bowls) were also recovered, although from mixed and disturbed contexts. The vast majority of the fine wares recovered from the Bala Hisar were 'Red Burnished Wares' (14927g) and Black/Grey Burnished Wares (56.6g). Illustrated examples are in bold and full counts and weights are provided in Table 8.2.

8.2.1 Red Burnished Ware

Sir Mortimer Wheeler awarded this title to a 'richly red or reddish ware, sometimes hand-made and usually polished, with a pleasant soapy feel' and attributed a date of c. 550–300 BC to its bowls, cups and pedestal vessels (Wheeler 1962: 39). The same ware was identified and termed 'red ware of fabric c' by Dani at the Gandharan Grave site of Timargarha (Dani 1967: 38) and within the latter periods of the Gandharan Grave sites in the Swat Valley as 'thin-sided red ware' by Stacul (Stacul 1966). Its distribution has been widened within the Vale of Peshawar with its recovery from the cemetery site of Zarif Karuna, where the vessels are 'well levigated and of fine quality..red slipped, both internally and externally...[and]...some specimens of smoothened surface indicate that the burnishing technique was applied' (Khan 1973: 29). As with Wheeler's examples from Charsadda (1962: 39), Zarif Karuna's vessels also included some examples with cordons (ibid.). Sherds of this ware were also been recovered from Hathial West in a variety of forms including open bowls and pedestalled cups, bowls and beakers (Dani 1986: 37) and renamed Red Burnished Ware by Allchin (1982), a term also used here. It is precisely these strong links, which have persuaded Stacul (1979), Dittmann (1984) and Vogelsang (1988) to propose a longer chronology for the Bala Hisar of Charsadda and to overturn Wheeler's basal dates of the middle of the first millennium BC. A total of 143 sherds weighing 6935g of Red Burnished Ware were recovered from in-situ contexts from the Bala Hisar of Charsadda. The presence of this ware from the very first occupation of the site is indicated by the recovery of three sherds trampled into the natural at the base of Trench Ch. VIII, below a date of between c. 1420 and 1160 BC. This early date confirms the validity of the longer Charsadda chronology and pushes its sequence firmly into the tradition of Swat Valley period IV. Finally, it should be noted that only eight sherds of Red Burnished Ware were found within the contexts of site Period III, the remaining 133 being firmly within Period II. Forms recovered from the Bala Hisar include beakers, cups, pedestal vessels and bowls on stands.

8.2.1.1 Straight sided-beaker B1 & B6

A total of 13 rim sherds (435g) of straight-sided beakers of Red Burnished Ware were recovered from in-situ levels in trenches Ch. VI and VIII. A further 84 examples (2255g) were recovered from redeposited levels. Three of the in-situ examples were recovered from the natural at the base of trench Ch. VIII in context 1099, indicating the antiquity of this form at the site. Indeed, they were also present in the basal cultural levels of the same trench in contexts dated to before c. 1420 and 1120 BC. They are similar in profile to the beaker from Sari Dheri, published by Wheeler in 1962 (1962: 48) but have few analogies at Timargarha and Balambat but more within the Swat Valley (Stacul 1966: Figure 71, No.i). It is worth noting that whilst most of the examples belonging to category B1 are decorated with cordons, there are two examples (B6) with the same profile but with no such decoration. Examples Sfs 633, 1146 & 1064 are illustrated in Figure 8.1 and Sf 1151 in Colour Plate 1.2.

Trench	Context	Period	Sf no.	Element	Diam (mm)	Weight (g)
VIII	1099	I		B1 rim	60	40
VIII	1099	I		B1 rim	60	20
VIII	1099	I		B1 rim	70	20
VI	71	II	626	B1 rim	100	70
VI	**71**	**II**	**633**	**B1 rim**	**65**	**25**
VI	71	II		B1 rim	70	40
VIII	1021	II		B1 rim	70	20
VIII	1021	II		B1 rim	60	40
VIII	1037	II		B1 rim	70	25
VIII	1040	II		B1 rim	85	10
VIII	1045	II		B1 rim	105	40
VIII	**1064**	**II**	**1151**	**B6 rim**	**65**	**65**
VIII	1077	II		B6 rim	50	20
VI	41	V		B1 rim	65	60
VI	58	V	634	B1 rim	55	20
VIII	1001	V		B1 rim	80	10
VIII	1001	V		B1 rim	100	40
VIII	1003	V		B1 rim	75	50
VIII	1003	V		B1 rim	70	15
VIII	1003	V		B1 rim	85	10
VIII	1003	V		B1 rim	65	10
VIII	1003	V		B1 rim	55	10
VIII	1003	V		B1 rim	60	30
VIII	1003	V		B1 rim	85	20
VIII	1003	V		B1 rim	80	10
VIII	1003	V		B1 rim	100	25
VIII	1003	V		B1 rim	70	30
VIII	1006	V	1144	B1 rim	60	30
VIII	1006	V		B1 rim	70	30
VIII	1006	V		B1 rim	65	40
VIII	1007	V		B1 rim	95	35
VIII	1007	V		B1 rim	60	40
VIII	1010	V	1145	B1 rim	40	60
VIII	**1010**	**V**	**1146**	**B1 rim**	**50**	**80**
VIII	1010	V		B1 rim	70	20
VIII	1012	V		B1 rim	90	30
VIII	1014	V	1103	B1 rim	85	50
VIII	1014	V		B1 rim	95	15
VIII	1014	V		B1 rim	95	20
VIII	1014	V		B1 rim	70	10
VIII	1014	V		B1 rim	75	10
VIII	1014	V		B1 rim	55	10
VIII	1014	V		B1 rim	70	30
VIII	1015	V		B1 rim	80	30
VIII	1015	V		B1 rim	80	40
VIII	1015	V		B1 rim	65	10
VIII	1018	V		B1 rim	90	30
VIII	1018	V		B1 rim	60	10
VIII	1018	V		B1 rim	95	30
VIII	1018	V		B1 rim	85	20
VIII	1018	V		B1 rim	110	10
VIII	1018	V		B1 rim	120	45
VIII	1018	V		B1 rim	90	20
VIII	1018	V		B1 rim	100	20
VIII	1018	V		B1 rim	85	45
VIII	1019	V		B1 rim	80	20
VIII	1020	V		B1 rim	110	30
VIII	1020	V		B1 rim	90	10
VIII	1020	V		B1 rim	90	20
VIII	**1028**	**V**	**1064**	**B1 rim**	**70**	**60**
VIII	1053	V	1078	B1 rim	150	20
VIII	1053	V		B1 rim	90	30
VIII	1053	V		B1 rim	85	20
VIII	1053	V		B1 rim	80	10
VIII	1079	V		B1 rim	95	40
VIII	1006	V		B6 rim	60	40
VIII	1006	V		B6 rim	70	20

VIII	1010	V		B6 rim	70	80
VIII	1010	V		B6 rim	65	10
VIII	1010	V		B6 rim	70	18
VIII	1010	V		B6 rim	60	10
VIII	1010	V		B6 rim	60	18
VIII	1012	V		B6 rim	60	20
VIII	1015	V	1152	B6 rim	60	40
VIII	1046	V		B6 rim	75	20
VIII	1048	V		B6 rim	70	30
VIII	1048	V		B6 rim	50	18
VIII	1067	V		B6 rim	65	30
VIII	1079	V		B6 rim	60	18
VIII	1079	V		B6 rim	60	18
VIII	1079	V		B6 rim	65	10
VIII	1079	V		B6 rim	60	20
VIII	1035	VI		B6 rim	95	30
VIII	1035	VI		B6 rim		50
VIII	1035	VI		B6 rim	50	45
VIII	1035	VI		B6 rim	80	10
VIII	1035	VI		B6 rim	95	10
VIII	1035	VI		B6 rim	60	10
VIII	1035	VI		B6 rim	115	30
VIII	1035	VI		B6 rim	120	40
VIII	1035	VI		B6 rim	90	30
VIII	1035	VI		B6 rim	90	30
VIII	1035	VI		B6 rim	90	10
VIII	1035	VI		B6 rim	60	60
VIII	1035	VI		B6 rim	75	30
VIII	1035	VI		B6 rim	75	30
VIII	1035	VI		B6 rim	60	10
VIII	1020	V		B2	85	10
VIII	1020	V		B2	25	10
VIII	1020	V		B2	75	10
VIII	1053	V		B2	65	10
VIII	1053	V		B2	85	10
VIII	1053	V		B2	50	10
VIII	1053	V		B2	50	10
VIII	1053	V		B2	75	10
VIII	1053	V		B2	55	10
VIII	1053	V		B2	60	10
VIII	1003	V		B7	50	10
VIII	1006	V	1148	B7	70	30
VIII	1046	V		B7	65	18
VI	7	VI		B2	65	20
VIII	1035	VI		B2	70	50
VIII	1035	VI		B2	70	10
VIII	1035	VI		B2	85	20
VIII	1035	VI		B2	60	10
VIII	1035	VI		B2	55	15
VIII	1035	VI		B2	60	30
VIII	1035	VI		B2	55	10
VIII	1035	VI		B2	60	10
VIII	1035	VI		B2	70	10
VIII	1035	VI		B2	60	10
VIII	1035	VI		B2	40	30
VIII	1035	VI		B2	70	10
VIII	1035	VI		B2	75	10
VIII	1035	VI		B2	75	10
VIII	1035	VI		B2	90	10
VIII	1035	VI		B7	70	20

8.2.1.2 Globular-sided beaker B2 & B7

Five globular-sided beakers (180g) were recovered from the in-situ levels at the Bala Hisar. An additional 55 examples (983g) were recovered from mixed contexts. Their only difference from beaker variant B1, is that B2 is more globular in profile with a slightly turned out lip. All examples are also of Red Burnished Ware and most are decorated with cordons. The globular profile is far more common within the site, as attested by Wheeler's illustration of a number (Wheeler, 1962: Figure 10, No. 5; Figure 11, No. 3), and it is a profile widely shared within the region at Zarif Karuna (Khan 1973: Figure 17, No. 17), Timargarha (Dani 1967: Figure 22, No. 11) in the Swat Valley (Stacul 1966: Figure 71, No. l) and in the Taxila Valley (Dani 1986: Figure 52). The distribution of this category within the profile of trench Ch. VIII is very similar to that of variant B1, suggesting that both were manufactured at the same time. The earliest example (B7) is a sub-variant without cordons and was recovered from context 1077. The earliest examples of both were recovered from context 1077 and date to c. 1420–1160 BC. Examples illustrated are Sfs 622/623, 1102, 1147 & 1160 in Figure 8.1.

Trench	Context	Period	Sf no.	Element	Diam (mm)	Weight (g)
VIII	1021	II		B 2	45	10
VIII	1031	II		B 2	80	50
VI	67	III		B 2	45	20
VIII	1077	II		B 7	40	20
VI	45	V	622+623	B2	55	60
VIII	1077	II	1160	B2	50	80
VI	58	V		B2	40	40
VIII	1001	V		B2	85	15
VIII	1001	V		B2	75	30
VIII	1001	V		B2	75	20
VIII	1083	V	1102	B2	85	50
VIII	1003	V		B2	70	10
VIII	1003	V		B2	65	20
VIII	1003	V		B2	65	10
VIII	1003	V		B2	70	30
VIII	1003	V		B2	80	15
VIII	1014	V		B2	65	20
VIII	1014	V		B2	85	20
VIII	1015	V		B2	95	10
VIII	1015	V		B2	80	10
VIII	1018	V		B2	55	10
VIII	1018	V		B2	70	10
VIII	1018	V		B2	70	10
VIII	1018	V		B2	75	10
VIII	1018	V		B2	60	10
VIII	1019	V		B2	55	20
VIII	1019	V		B2	80	10
VIII	1019	V		B2	70	10
VIII	1020	V	1147	B2	50	80
VIII	1020	V		B2	65	10

8.2.1.3 Concave-sided beaker B3

A single example of an hour-glass beaker (80g) was recovered from mixed contexts in trench Ch. VI (Figure 8.1). Its presence at the Bala Hisar of Charsadda is significant a number of scholars have commented that Charsadda has none of the biconical and hour-glass types seen in the northern valleys (Stacul 1966: 77; Dani 1976: 40). Whether this very low count is a feature of function rather than period, cemeteries versus settlements, will be unclear until more absolute chronologies for cemetery sites are forthcoming.

Trench	Context	Period	Sf no.	Diam (mm)	Weight (g)
VI	42	V	620	75	80

8.2.1.4 Beaker base B4

Four examples of beaker base B4 were recovered from a single context, 71, in trench Ch. VI. A further seven examples (530g) were recovered from disturbed levels. The vessel is pinched in immediately above a solid ring foot, before it widens in a distinct carination and near vertical walls above it. It would fit beaker rim B1 better than B2 and has distinct cordons above the foot. It is very similar in profile to Wheeler examples No. 16 (Wheeler 1962: 47) and No. 3 (Wheeler 1962: 38), Stacul example No. i (Stacul 1966: 71) and Timargarha example No. 7 (Dani 1967: 124). Our four examples (400g) were recovered from context 71, which has a radiocarbon date of c. 1140–890 BC. Examples Sfs 625 & 875 have been illustrated (Figure 8.2) (Colour Plate 1.2)

Trench	Context	Period	Sf no.	Foot diam (mm)	Weight (g)
VI	71	II	621	30	160
VI	71	II		62	120
VI	71	II		62	80
VI	71	II		54.3	40
VI	35	V		61	100
VI	42	V		67.7	100
VI	45	V	624	25	100
VI	45	V	625	45.3	50
VI	45	V		54.3	40
VI	58	V	875	70	120
VI	7	VI		42.1	20

8.2.1.5 Cup B6

Four examples of category B6 cup were recovered from the recent excavations at the Bala Hisar of Charsadda (170g). Sfs 1150 & 1104 are distinctly globular in profile, while Sfs 619 & 653 have a less pronounced exterior pro-

file. Sf 653 is a notable example as it is the only cup to have no cordon decoration. None of the cup bases are preserved so it is impossible to suggest whether they were originally attached to a long or short foot or pedestal (see Sections 8.2.1.5 & 8.2.1.6). The latter profile is well known in the Swat Valley (Stacul 1966). With the exception of Sf 653, this form has been found in the upper levels of Period II, suggesting a date of c. 1160 and 980 BC. All our four examples are illustrated in Figure 8.2 and Sf 1150 in Colour Plate 1.2.

Trench	Context	Period	Sf no.	Diam (mm)	Weight (g)
VI	71	II	619	70	50
VIII	1031	II	1104	80	45
VIII	1037	II	1150	60	60
VI	67	III	653	55	15

8.2.1.6 Pedestal vessels H3 & H4

Wheeler recovered a limited number of pedestals from his excavations at Charsadda (Wheeler 1962: 91) but they are better known from sites of the Gandharan Grave culture. At Zarif Karuna, for example, Khan reported a number of bowls on long stems and cites clear affinities with Loebanr, Katelai, Timargarha and Balambat (Khan 1973: 32–34). Associated with 'Rippled Rim' forms at Timargaraha, Thana and Balambat (Dani 1967: 127, 222, 250), these vessels are usually bowls or cups and are relatively long-lived belonging to Swat Period V, VI and VII (Vogelsang 1992: 247). Unfortunately, none of the Charsadda examples allow us to identify the nature of the vessel or foot. We recovered eight sherds of this category (1590g), all but one from site Period II. That one sherd, presumably redeposited, was found in the fills of ditch 2, whilst the remainder are clustered in earlier contexts. Four sherds were recovered from trench Ch. VI, including three (860g) from wall melt 71, which has a date of c. 1140–890 BC, and a single sherd from the fills of feature 61, which has a date of c. 1220–1020 BC. Two sherds were recovered from the upper in-situ levels in trench Ch. VIII, but one was found in old land surface 1078 in phase II.A, which is below an old land surface dated c. 1420–1120 BC. Also included within this category, although somewhat separate, is an example from context 71 of a stem with a small interior channel (H4), whilst all the other examples are solid (H3). Sfs 799 & 800 are illustrated in Figure 8.2 and Sf 799 in Colour Plate 1.2.

Trench	Context	Period	Sf no.	Element	Diam (mm)	Weight (g)
VI	57	II		H3 stem	33.5	70
VI	71	II	799	H3 stem		500
VI	71	II	800	H3 stem	37.9	200
VI	71	II		H3 stem	?	160
VIII	1021	II.D		H3 stem	44.4	160
VIII	1021	II.D		H3 stem	44	110
VIII	1078	II.A		H3 stem	50.2	330
VI	71	II		H4 stem	37.1	170
III	27	III		H3 stem	?	60

8.2.1.7 Dish on stand/short pedestal H1 & H2

Wheeler also published a vessel on a short pedestal of Soapy Red Ware from Ch. III, which he equated with Ch. I layer 48 (Wheeler 1962: 88). This form has also been reported from the cemetery at Zarif Karuna (Khan 1973: 35) and consists of two variants: H1 with a hollow pedestal, and H2 with a solid one. This form also has affinities with ceramics from Swat Period IV at the sites of Kherai and Loebanr 3 (Stacul 1987: 85) and Kalako-deray (Stacul 1993: 81). Three examples (340g) from Charsadda were recovered in in-situ archaeological deposits, two in Period II and one in Period III. The two earlier examples were found in contexts 71 and 1021, the former providing dates of c. 1140–890 BC. Sfs 797, 794 & 796 are illustrated in Figure 8.3.

Trench	Context	Period	Sf no.	Element	Foot diam (mm)	Weight (g)
VI	71	II		H1 bowl	35	80
VII	1021	II.D		H1 bowl	50	200
VI	35	VI	794	H1 bowl	40	200
VI	66	III		H2 bowl	35	60
VI	7	VI	797	H2 bowl	35	200
VI	40	VI	796	H1 bowl	30	240

8.2.1.8 Dishes G9 & G11

Two sherds of dish G9 (180g) were found in in-situ contexts in trench Ch. VIII, in addition to a further six examples (620g) from mixed levels. The dish diameters vary between 140 and 180mm and the rim was near horizontal from the low angle of the walls. The in-situ examples can be dated to c. 1160–980 BC. Similarly shallow examples are known from Charsadda (Wheeler 1962: Figure 11, No. 7) but only example No. 30 comes close and is higher up the sequence than the earlier examples (Wheeler 1962: 49). Bowl rim G11 is similar to Wheeler 1962: Figure 11, No. 8, but Sf 991 is decorated with appliqué cordons rather than with a comb. It can be dated to before old land surfaces dating to c.1160–890 BC. Examples illustrated are Sfs 1175 & 991 in Figure 8.3 and Sf 991 in Colour Plate 1.2.

Trench	Context	Period	Sf no.	Element	Diam (mm)	Weight (g)
VIII	1031	II		G9 dish	180	100
VIII	1045	II		G9 dish	140	80
VIII	1001	V	1176	G9 dish	150	220
VIII	1003	V		G9 dish	120	80
VIII	1003	V		G9 dish	150	80
VIII	1018	V	1177	G9 dish	140	100
VIII	1035	VI	1175	G9 dish	190	80
VIII	1035	VI		G9 dish	190	60
VIII	1052	VI	991	G11 dish	210	90

8.2.1.9 Bowl Q1

Two sherds of Red Burnished Ware bowl Q1 were recovered from Period II of trench Ch. VIII weighing 200g. The profile of Q1 is extremely similar to No. 29 from Charsadda (Wheeler 1962: 49) and similar to No. c from the Swat Valley (Stacul 1966: 75). The two in-situ samples were recovered from contexts dating to c. 1190–890 BC and there were a further 22 sherds (1910g) from mixed layers. For a well-preserved profile of Q1, see also coarse ware examples in Figure 8.12.

Trench	Context	Period	Sf no.	Diam (mm)	Weight (g)
VIII	1031	II		170	70
VIII	1041	II		160	130
VIII	1001	V		155	40
VIII	1001	V		130	70
VIII	1003	V		190	70
VIII	1003	V		185	100
VIII	1003	V		175	50
VIII	1003	V		180	70
VIII	1006	V		170	70
VIII	1006	V		150	60
VIII	1006	V		170	90
VIII	1010	V		180	90
VIII	1012	V		165	40
VIII	1012	V		170	50
VIII	1012	V		170	100
VIII	1014	V		170	150
VIII	1014	V		185	70
VIII	1015	V		160	30
VIII	1015	V		170	160
VIII	1046	V		180	130
VIII	1048	V		170	80
VIII	1075	V		190	170
VIII	1035	VI		175	130
VIII	1035	VI		180	90

8.2.1.10 Modified body sherd

A single modified body sherd of Red burnished ware (50g) was recovered from mixed contexts in trench Ch. IX. A pierced and circular sherd, it probably functioned as a wheel for a terracotta cart or animal.

Trench	Context	Period	Sf no.	Diam (mm)	Weight (g)
IX	1075	V	1073	69	50

8.2.1.11 Undiagnostic body sherds

The most numerous category of in-situ Red Burnished Ware was undiagnostic body sherds, which numbered 103 (3450g), with a further 68 from mixed context (2342g). All but five sherds were recovered from within site Period II and it is interesting to note that all came from trench Ch. VI, confirming suspicions that it marks the edge of the settlement and thus was more likely to attract discarded material. The oldest examples were recovered from the fills of trench 61 and have a date of c. 1220–1020 BC. Most sherds had evidence of cordons and are likely to have been part of beakers although other, such as Sf 629, were decorated with wavy lines and were probably from bowls.

Trench	Context	Period	Sf no.	Length (mm)	Weight (g)
VI	57	II			40
VI	57	II			60
VI	57	II			40
VI	57	II			80
VI	57	II			40
VI	57	II			40
VI	57	II		80	20
VI	57	II		85	25
VI	57	II			25
VI	57	II		50	30
VI	57	II			40
VI	57	II			40
VI	57	II			30
VI	57	II			20
VI	57	II			40
VI	57	II		70	50
VI	57	II			40
VI	57	II			20
VI	60	II		90	50
VI	60	II		65	20
VI	60	II		60	50
VI	60	II		65	20
VI	71	II			30
VI	71	II			60
VI	71	II			40
VI	71	II			50
VI	71	II			50
VI	71	II			50
VI	71	II			60
VI	71	II			40
VI	71	II			40
VI	71	II			40
VI	71	II			30
VI	71	II			30
VI	71	II			50
VI	71	II			60
VI	71	II			60
VI	71	II			80
VI	71	II			40
VI	71	II		45	20
VI	71	II		55	25
VI	71	II		60	20
VI	71	II		95	20
VI	71	II		85	40
VI	71	II		75	15
VI	71	II		60	20
VI	71	II		75	20
VI	71	II			20
VI	71	II		75	20
VI	71	II			35
VI	71	II			50
VI	71	II			40
VI	71	II			30
VI	71	II			40
VI	71	II			50
VI	71	II			50
VI	71	II			60
VI	71	II			30
VI	71	II			10
VI	71	II			5
VI	71	II			10
VI	71	II			20
VI	71	II			20
VI	71	II			10
VI	71	II			25
VI	71	II			30
VI	71	II			30
VI	71	II			40
VI	71	II			20
VI	71	II			40
VI	71	II			10
VI	71	II			20
VI	71	II			40
VI	71	II			30
VI	71	II			10
VI	71	II			30
VI	71	II			20
VI	71	II			20
VI	71	II			20
VI	71	II			20
VI	71	II		70	40
VI	71	II		75	40
VI	71	II		85	60
VI	71	II		85	40
VI	71	II		75	20
VI	71	II		65	50
VI	71	II		65	40
VI	71	II		55	40
VI	71	II			30
VI	71	II		65	40
VI	71	II		60	20
VI	71	II		55	30
VI	71	II			10
VI	71	II		75	15
VI	71	II		70	20
VI	71	II			35
VI	71	II			50
VI	71	II			15
VI	25	III			20
VI	28	III			20
VI	32	III			10
VI	66	III			50
VI	66	III			40
VI	35	V			40
VI	35	V			40
VI	35	V			20
VI	35	V			35
VI	35	V			20
VI	35	V			20
VI	35	V			20
VI	35	V		85	70
VI	35	V			40
VI	35	V		55	20
VI	39	V		50	20
VI	39	V			25
VI	40	V		110	40
VI	40	V			60
VI	40	V			40
VI	40	V			20
VI	41	V			30
VI	41	V		90	60
VI	41	V		70	20
VI	42	V	629		40
VI	42	V			40
VI	42	V		75	50
VI	42	V			40
VI	42	V			15
VI	42	V			10
VI	42	V			30
VI	43	V			90
VI	45	V			50
VI	45	V			40
VI	45	V		75	25
VI	45	V		75	40
VI	45	V			50
VI	45	V			10
VI	45	V			20
VI	45	V		70	25
VI	45	V		75	40
VI	45	V			40
VI	45	V		90	40
VI	45	V		55	60
VI	45	V		65	10
VI	46	V			20
VI	52	V			40
VI	54	V			30
VI	54	V			40
VI	58	V			40
VI	58	V		75	30
VI	58	V		60	30
VI	58	V			30
VI	58	V			20
VI	58	V			20
VI	58	V			30
VI	58	V			40
VI	58	V		80	60
VI	58	V		90	40
VI	58	V		60	30
VI	64	V			40
VI	64	V		75	10
VI	69	V			50
VI	6	VI		45	20
VI	6	VI		90	40

VI	7	VI			40
VI	7	VI			70
VI	7	VI			7
VI	7	VI	80		40
VI	7	VI	60		50
VI	7	VI	45	15	
VI	7	VI	70		25
VI	7	VI	75		30

8.2.2 Black/Grey Burnished Ware

Seven body sherds of fine grey or black-slipped wares were recovered from trenches Ch. VI and VIII, two of which (Sfs 993 & 950) were from archaeologically in-situ levels. The presence of such sherds at the Bala Hisar of Charsadda is attested by Sir Mortimer Wheeler, while writing a section on the site's Northern Black Polished Ware (Wheeler 1962: 41), registered a limited number of vessels of 'grey ware' (Wheeler 1962: 51). Whilst Sf 668, from mixed contexts, appears to justify its label of NBP on account of its bowl form and fine slip (see Section 8.2.2.3) and Sf 306 is from a very fine black slipped vessel, five of the other sherds (Sfs 950, 127, 212, 993 & 700) are less convincing. Sfs 212 & 700 have dark grey core and exteriors, whilst Sfs 950, 993 & 127 have black slips but grey interiors, but all and have a slightly matt, burnished exterior treatment; moreover, they do not appear to belong to the same class of 'Indic' dishes and carinated bowls reported by Wheeler (Dani 1966: 136). One in-situ example, Sf 950, also has a decoration of at least six cordons on its exterior, whilst Sfs 700 & 212 both have deeply incised lines. These features combined suggest that these three sherds belong to the well-known corpus of black, brown and grey wares in the Swat and Dir Valleys. Examples of these would include the reduced-fired grey examples from Timargarha, Thana (Dani 1967: 123), Zarif Karuna (Khan 1973: 26) as well as unpublished examples held in the University of Peshawar Museum. The early date of Sf 950, c. 1140–890 BC, supports this hypothesis and suggests that Dani is wrong in arguing that Timargarha is necessarily older because Wheeler's excavations at Charsadda yielded no grey wares (Dani 1967: 40), but also suggests that he may have been correct in suggesting that grave sites may be more associated with Black/Grey Burnished Wares than settlement sites. Fundamentally, the two wares are the same, all that differs is the firing conditions; perhaps this is all that also divides the living community from the dead.

8.2.2.1 Anthropomorphic figure

Sf 993 was first erroneously catalogued as a fragment of terracotta bangle as it was curved in section and appeared to have broken ends, before it was reclassified as an anthropomorphic figure carved from a curved ceramic body sherd. With a fine grey fabric and black burnished exterior, the figure has a rounded head, two short arms coming out from the body at right angles and prominent hips which merge into long legs terminated in two points (Colour Plate 1.2) (Plate 8.1) (Figure 8.3). The figure was recovered from context 1052, an old land surface within trench Ch. VIII, which seals pit fill 1062. Context 1062 provides a useful dating point for Sf 993 as it has a radiocarbon measurement of c. 1250–1040 BC. This artefact is extremely rare and only has a single analogy within the region, No. 28 from Period III of Balambat (Dani 1967: Plate LIVb, No. 8). Although the Balambat example has a more oblong head, more rounded arms and less pronounced legs, it is still extremely similar and was recovered from a pit within one of the structures exposed in Trench C2 (Dani 1967: 277). This analogy again confirms the close relationship, chronologically and culturally, between the Dir Valley and the Vale of Peshawar.

Trench	Context	Period	Sf no.	Size (mm)	Weight (g)
VI	1052	II	993	2.8 x 0.8	4

8.2.2.2 Undiagnostic body sherd

As noted in Section 8.2.2, a single undiagnostic body sherd of Black/Grey Burnished Ware (Sf 950) was recovered from in-situ levels of site Period II with a date of c. 1140–890 BC (Colour Plate 1.1). It was decorated with cordons. Three other sherds of this ware (23.9g) were recovered from disturbed and mixed levels. Sf 700, a large sherd with cordons is also illustrated in Plate 8.2.

Trench	Context	Period	Sf no.	Weight (g)
VI	71	II	950	12.4
VI	37	V	212	9
VIII	1010	V	700	4.9
VI	7	VI	127	10

8.2.2.3 NBP sherd

As noted above, Sir Mortimer Wheeler reported the recovery of 12 sherds of this well-known ware from his excavations in 1958 (Wheeler 1962: 41). Although Wheeler's date of between the fifth and second centuries BC has been widened (Erdosy 1995: 105), it still remains a crucial tool for relative dating. Only one example of this ware (an undiagnostic rim) was recovered during our excavations (Sf 668), and that was from disturbed levels (Colour Plate 1.1).

Trench	Context	Period	Sf no.	Diam (mm)	Weight (g)
VIII	1003	V	668	?	4.6

8.2.2.4 Black-slipped body sherd

A single sherd of very fine black slipped pottery (Sf 306) was recovered from levels belonging to Period VI in trench Ch. III. This sherd is quite distinct from the other black or black-brown slipped wares as it is so fine. It appears to represent a handle or knob, confirming its difference from NBP or black-slipped ware of the Gandharan Grave tradition.

Trench	Context	Period	Sf no.	Diam (mm)	Weight (g)
III	1	VI	306	?	18

8.2.2.5 Lotus bowls

In 1958, Sir Mortimer Wheeler encountered number of very fine buff or reddish buff ware bowls with 'A well-formed lotus' impressed on the centre of the interior (Wheeler 1962: 41). Dating to between the 2nd and 3rd century BC, Wheeler suggested that it was 'more than a coincidence in the association of the Lotus Bowls with the Lotus City, a 'Present from Pushkalavati'" (Wheeler 1962: 35). Only one example of this category, base Sf 22, was recovered from our excavations although there were a number of lotus impressions on coarse ware vessels (see Section 8.3.1.7). This late form was recovered from mixed and disturbed contexts but is illustrated in Colour Plate 1.2.

Trench	Context	Period	Sf no.	Element	Weight (g)
VI	4	VI	22	Base	1.7

8.3.1 The coarse wares

As noted above, coarse ware represent the largest category of ceramic objects and have been divided into diagnostic and non-diagnostic objects. The former comprise 5226 examples (249kg) and the latter 64618 examples (1731kg). The former include vessels, modified sherds such as ceramic wheels, oil lamps, votive tanks, potters' konoras or dabbers, potters' marks and one inscription. Diagnostic vessels have been further sub-divided into rim, base, lug, handle, spout and decoration form and whilst in-situ or illustrated examples have been recorded in fill, numbers and weights from mixed contexts of Periods V and VI are summarised in Table 8.3.

8.3.1.1 Rims

8.3.1.1.1 Jar with rippled rim A1

One of the most recognisable forms recovered from the Bala Hisar of Charsadda is that known as the rippled rim (Figures 8.4 & 8.5) (Plate 8.2). Encountered by Wheeler in 1958, he described it as a 'fairly large globular jar or cooking-pot...The buff-brown ware usually had a rough gritty surface... The rims were unmistakable; they were sharply out-turned, usually an inch or more in length, and were notched or rippled on the edge.' (Wheeler 1962: 37). Wheeler recorded their distribution within his trenches and limited them to the lowest levels of the site with sherds at the base of Ch. I and Ch. II, but not in Ch. IV and V on the eastern mounds and suggested a date of between 550 and 325 BC (Wheeler 1962: 39). Comparisons with complete vessels from the cemetery site of Timargarha indicate that the bodies were ovoid and bases were disc-shaped and flat (Dani 1967: Figure 29, No. 7) and all our well-preserved examples had a surface treatment of sand below the neck. We recovered 35 sherds (1830g) of rippled rim from archaeologically in-situ contexts at the Bala Hisar. All but five sherds (150g) were recovered from within the contexts of Period II, demonstrating a very tight chronological boundary for this type at the Bala Hisar. It is also one of the oldest ceramic types encountered at the site, one sherd having been removed from the upper surface of natural soil 1099 at the very base of trench Ch. VIII and the majority of the others having been recovered from that trenches phases II.A and II.B. Its distribution in trench Ch. VI co-ordinates well with the radiocarbon dates for this trench with only two sherds (70g) recovered from the fill of later ditch cut 55, which has a radiocarbon date of c. 790–450 BC (GrA-5247) but ten sherds (605g) from wall melt 71, which has a radiocarbon date of c. 1140–890 BC. The relationship between this feature (71) and ditch cut 61 postulated in Section 5.3.2 is confirmed by the presence of rippled rim almost exclusively in these two features as a further 20 sherds weighing 1145g. Only two sherds (70g) of rippled rim were recovered from the fresh section of ditch cut 2 in trench Ch. III, further reinforcing the almost exclusively early date of this type. The greatest numbers were recovered from within trench Ch. VIII. These dates, centuries older than those postulated by Wheeler, certainly justify then claims by Dittmann (1984), Vogelsang (1988; 1992) and others that the lowest levels of the Bala Hisar date to the first second millennium BC. Its distribution is fairly distinct having been recovered from the Swat valley at the settlements of Aligrama and Bir-kot-ghwandai (Stacul 1987: Figure 28) and the cemeteries of Loebanr 3, (Stacul 1987: Figure 28) and Thana (Durrani 1967: Figure 47, No. 40); and in the Dir valley at the cemetery site of Timargarha (Dani 1967: Figure 24, No. 1), and in the graves and settlement at Balambat (Dani 1967: 246 & Figure 51, No. 9). This form is also known within the Vale of Peshawar with examples recovered from the excavations at the cemetery site of Zarif Karuna (Khan 1973: Figure 6, No. 16) as well as two sherds recovered during Ihsan Ali's survey of Charsadda District at the sites of Nisatta graveyard and Jhara Sikander Abad (Ali 1994: Figure 5, nos. 11 & 13). It is noteworthy that such sherds have not been published from more recent fieldwork at Akra in Bannu nor from Taxila but if we search for antecedents, there are clear profile and rim affinities with a vessel from Period II of the Ghaligai sequence dating to c. 2180 BC (Stacul 1987: Figure 11, No. e). A further 75 sherds (4780g) were recovered from mixed levels within Periods V & VI, of which two well preserved examples (Sfs 613 & 615) are illustrated. Four of our illustrated examples (Sfs 117, 118, 119, 120) were incised with potters' marks on the interior collar

Trench	Context	Period	Sf no.	Ware	Diam (mm)	Weight (g)
III	47	III		Coar/sand	125	30
III	48	III		Coar/sand	135	40
VI	57	II	614	Coar/sand	135	210
VI	57	II		Coar/sand	110	110
VI	57	II		Coar/sand	150	90
VI	57	II		Coar/sand	?	50
VI	57	II		Coar/sand	120	50
VI	57	II		Coar/sand	?	40
VI	57	II		Coar/sand	155	20
VI	57	II		Coar/sand	?	20
VI	57	II		Coar/sand	115	25
VI	57	II		Coar/sand	125	30
VI	57	II		Coar/sand	125	25
VI	57	II		Coar/sand	?	30
VI	60	II		Coar/sand	105	120
VI	60	II		Coar/sand	135	80
VI	60	II		Coar/sand	155	20
VI	60	II		Coar/sand	85	30
VI	60	II		Coar/sand	145	40
VI	60	II		Coar/sand	115	25
VI	60	II		Coar/sand	125	40
VI	60	II		Coar/sand	?	20
VI	71	II	612	Coar/sand	100	120
VI	71	II		Coar/sand	130	60
VI	71	II		Coar/sand	150	40
VI	71	II		Coar/sand	135	40
VI	71	II		Coar/sand	130	160
VI	71	II		Coar/sand	125	80
VI	71	II		Coar/sand	145	25
VI	71	II		Coar/sand	80	30
VI	71	II		Coar/sand	?	20
VI	71	II		Coar/sand	80	30
VI	73	III		Coar/sand	145	40
VI	80	III		Coar/sand	135	30
VIII	1031	II.D		Coarse	85	260
VIII	1043	II.D		Coarse	100	30
VIII	1054	II.C		Coarse	155	20
VIII	1054	II.C		Coarse	100	10
VIII	1064	II.B	1120	Coarse	190	90
VIII	1064	II.B		Coarse	110	40
VIII	1064	II.B		Coarse	140	30
VIII	1064	II.B		Coarse	90	30
VIII	1064	II.B		Coarse	115	30
VIII	1064	II.B		Coarse	100	20
VIII	1070	II.B		Coarse	165	110
VIII	1071	II.B		Coarse	90	110
VIII	1077	II.B	1117	Coarse	110	50
VIII	1077	II.B	1118	Coarse	115	150
VIII	1077	II.B	1119	Coarse	?	20
VIII	1077	II.B		Coarse	155	40
VIII	1077	II.B		Coarse	140	100
VIII	1077	II.B		Coarse	140	100
VIII	1077	II.B		Coarse	110	50
VIII	1077	II.B		Coarse	80	15
VIII	1077	II.B		Coarse	100	30
VIII	1077	II.B		Coarse	105	15
VIII	1077	II.B		Coarse	120	10

VIII	1077	II.B		Coarse	115	10
VIII	1077	II.B		Coarse	120	30
VIII	1077	II.B		Coarse	130	20
VIII	1077	II.B		Coarse	100	150
VIII	1077	II.B		Coarse	120	60
VIII	1077	II.B		Coarse	150	130
VIII	1077	II.B		Coarse	90	60
VIII	1077	II.B		Coarse	130	60
VIII	1077	II.B		Coarse	85	20
VIII	1078	II.A	1116	Coarse	165	30
VIII	1078	II.A		Coarse	120	90
VIII	1078	II.A		Coarse	115	30
VIII	1078	II.A		Coarse	35	10
VIII	1078	II.A		Coarse	100	60
VIII	1078	II.A		Coarse	100	80
VIII	1078	II.A		Coarse	80	100
VIII	1078	II.A		Coarse	90	60
VIII	1078	II.A		Coarse	110	40
VIII	1078	II.A		Coarse	80	40
VIII	1078	II.A		Coarse	70	35
VIII	1082	II.A		Coarse	80	50
VIII	1082	II.A		Coarse	110	10
VIII	1082	II.A		Coarse	110	15
VIII	1099	I		Coarse	120	10
VI	35	V	613	Coar/sand	33	160
VI	42	V	615	Coar/sand	51.5	100

8.3.1.1.2 Jar without rippled rim A2

We also recovered eight rim sherds (579g) of an ovoid and flat-bottomed jar, which is very similar to Form A1 as it also has a rough gritty surface with sharply out-turned but no rippled or notched decoration (Figure 8.5) (Plate 8.2). Wheeler also recovered sherds of this type from low in the Ch. I sequence (Wheeler 1962: Figure 11, No. 11) and have also been recorded in Swat (Stacul 1987: Figure 28) and Dir (Dani 1967: 246 & Figure 51, No. 10). Our evidence from Charsadda supports their antiquity, where six of our eight sherds (489g) were recovered from Period II, five from wall melt 71 and one from the fills of cut 61. It is likely that the two sherds from Period III are residual and their absence from trench Ch. VIII is notable. A further 24 sherds (2086g) were recovered from mixed levels. One of our illustrated examples (Sfs 971) was incised with potters' marks on the interior collar.

Trench	Context	Period	Sf no.	Ware	Diam (mm)	Weight (g)
VI	71	II	670	Coar/sand	90	220
VI	16	III	671	Coarse	110	30
VI	71	II		Coarse	160	60
VI	71	II		Coar/sand	90	220
VI	71	II		Coar/sand	250	40
VI	71	II		Coar/sand	110	64
VI	71	II		Coar/sand	110	40
VI	72	III		Coar/sand	160	60

8.3.1.1.3 Tulip bowls C1, C2 & C3

One of the key-types identified by Wheeler at Charsadda was the tulip cup or bowl, which he described as 'Little round-bottomed vessels of a buff or brownish ware, wheel-turned, with a 'kick' or slight carination half-way down the side (Figure 8.6) (Plate 8.2). An abundant and not ungraceful drinking-bowl.' (Wheeler 1962: 40). Wheeler dated it to between the second and third centuries BC (Wheeler 1962: 40), but whilst Dittmann has suggested the fourth to third century BC due to its similarities with pre-Achaemenid 'Cream Bowls' (Dittmann 1984: 172), Vogelsang favours a post-Achaemenid date due to its presence at Shaikhan Dheri (1988: 104). Of the 86 sherds (2155g) from our excavations only four sherds (75g) of tulip cups were recovered from archaeologically in-situ contexts at Charsadda, and appear to comprise two variants. The first, C1 has a distinct lip on the interior in line with the exterior 'kick' whilst C2 has a smooth interior. One of the sherds was from Period III (20g) and was found within the fills of ditch cut 2. Its date, derived from radiocarbon samples from its continuation in trench Ch. VI, is to c.770–410 BC, relating better to Dittmann's chronologies (1984: 172) than Vogelsang's (1988: 104). Three additional sherds were recovered from Period II (55g), two from trench Ch. VIII and one from trench Ch. VI.. Those from the former were recovered from the final in-situ occupation phase and younger than the 8th century BC but are most likely redeposited. The single small sherd from context 71 in trench VI is almost certainly redeposited as it was recovered from contests dating to at least the 10th century BC. The presence of small weights of redeposited material is to be expected on account of plant and animal action but does not seriously impact on out sequence. A third variant (C3), with an incised wavy line on the upper surface of the lip, was only recovered from mixed levels; variant C is only partial and thus may represent C1, C2 or C3.

Trench	Context	Period	Sf no.	Element	Ware	Diam (mm)	Weight (g)
III	15	III		C1 rim	Coarse	75	20
VI	71	II		C1 rim	Coarse	?	10
VIII	1021	II.D		C2 rim	Coarse	55	35
VIII	1021	II.D		C2 rim	Coarse	75	10
VIII	1003	V	1153	C2 rim	Coarse	50	30
VI	35	V	638	C1 rim	Coarse	60	50
VI	54	V	637	C1 rim	Coarse	75	100
VI	42	V	641	C2 rim	Coarse	60	15
VI	7	VI	639	C2 rim	Coarse	60	20
VI	58	V	1017	C3 rim	Coarse	90	30

8.3.1.1.4 Jar with collared rims D1, D2, D3 & D4

A total of 24 rim sherds (738g) of large jars with collared rims were recovered from in-situ contexts in trenches Ch. VI and VIII (Figure 8.7) (Plate 8.2). A further 168 examples (4915g) were recovered from the mixed levels of Period V & VI. Four variants were present, differentiated on account of the differing numbers of bands on their exterior rims; D1 has two bands (one broad and one narrow), D2 three bands (a broad band with a narrow band either side), D3 three bands (a broad upper band and two narrow lower bands), and D4 four bands (a broad upper band and three narrow lower bands). Such variants are known within the region as Wheeler published an example of D3 from layer 22 of trench Ch. I (Wheeler 1962: 67), and Dani a D4 from Grave 107 at Timargarha (Dani 1967: Figure 34, No. 7). Variants D1, D2 and D3 were all recovered from Period II, but D4 was only recovered from Period III, the former group providing an analogous chronology with Timargarha. Dani has suggested that this form functioned as a water pitcher (Dani 1967: 150).

Trench	Context	Period	Sf no.	Element	Diam (mm)	Weight (g)
VI	71	II		D1 rim	40	75
VI	71	II		D1 rim	35	75
VI	71	II		D1 rim	15	50
VI	71	II		D1 rim	10	35
VI	11	III		D1 rim	20	65
VI	11	III		D1 rim	20	70
VI	11	III		D1 rim	10	130
VI	12	III		D1 rim	25	70
VI	66	III		D1 rim	30	65
VI	66	III		D1 rim	40	75
VI	66	III		D1 rim	20	60
VI	67	III		D1 rim	30	60
VI	72	III		D1 rim	20	55
VI	79	III		D1 rim	15	50
VI	80	III		D1 rim	25	60
VI	80	III		D1 rim	20	60
VI	60	II		D2 rim	40	42
VI	71	II		D2 rim	30	65
VI	66	III		D2 rim	20	60
VI	47	III		D4 rim	20	60
VI	66	III		D4 rim	20	50
VI	67	III		D4 rim	40	60
VIII	1021	II		D1 rim	40	60
VIII	1040	II		D3 rim	18	50
VI	58	VI	674	D1 rim	75	70

VI	7	VI	675	D2 rim	75	35
VI	69	VI	677	D3 rim	70	30
VI	41	VI	678	D4 rim	70	40
VI	7	VI	679	D4 rim	65	40

8.3.1.1.5 Jar with everted rims E1–E8

A total of 132 rim sherds of category E (10975g) were recovered from in-situ levels at the Bala Hisar in trenches Ch. VI and VIII. Belonging to seven variants, E1 (narrow band above broad rounded band on exterior), E2 (broad rounded band above narrow band on exterior), E3 (single rounded band on exterior), E4 (twin rounded bands on exterior), E5 (single rounded band on exterior but single narrow band on top), E6 (single rounded band on exterior with flat top), E7 (single rounded band with flat bottom), and E8 (single band with straight edge on exterior). Analogous forms have been published from Balambat, such as No. 5 of Dani's Figure 58 (Dani 1967: 256), which corresponds to variant E1 albeit from 'Achaemenian' levels. Variants E1, E2, E3, E4 and E5 were found in Periods II and III, whilst E7 was only found in Period III and E8 only in Period II. No in-situ examples of E6 were recovered. A further 1142 sherds of this jar form (36714g), were recovered from the mixed layers of Periods V & VI, some of which are illustrated in Figures 8.8 & 8.9 and in Plate 8.3.

Trench	Context	Period	Sf no.	Element	Diam (mm)	Weight (g)
VI	57	II		E1 rim	10	50
VI	57	II		E1 rim	20	10
VI	57	II		E1 rim	10	10
VI	71	II	717	E1 rim	40	65
VI	71	II		E1 rim	20	60
VI	71	II		E1 rim	20	65
VI	71	II		E1 rim	40	80
VI	71	II		E1 rim	30	65
VI	71	II		E1 rim	10	75
VI	71	II		E1 rim	15	70
VI	71	II		E1 rim	20	50
VIII	1021	II		E1 rim	18	60
VIII	1021	II		E1 rim	10	50
VIII	1030	II		E1 rim	20	125
VIII	1031	II		E1 rim	38	65
VIII	1031	II		E1 rim	20	50
VIII	1043	II		E1 rim	30	70
VIII	1051	II		E1 rim	40	70
VI	11	III		E1 rim	20	60
VI	11	III		E1 rim	10	110
VI	11	III		E1 rim	20	80
VI	11	III		E1 rim	70	80
VI	11	III		E1 rim	30	65
VI	11	III		E1 rim	15	80
VI	11	III		E1 rim	20	75
VI	15	III		E1 rim	10	120
VI	21	III		E1 rim	18	150
VI	27	III		E1 rim	20	70
VI	27	III		E1 rim	20	70
VI	28	III		E1 rim	20	70
VI	28	III		E1 rim	40	75
VI	66	III	715	E1 rim	75	180
VI	66	III		E1 rim	50	75
VI	66	III		E1 rim	30	65
VI	66	III		E1 rim	20	75
VI	66	III		E1 rim	20	80
VI	66	III		E1 rim	30	75
VI	66	III		E1 rim	40	75
VI	67	III		E1 rim	30	85
VI	72	III	689	E1 rim	70	75
VI	72	III		E1 rim	20	85
VI	72	III		E1 rim	20	75
VI	75	III		E1 rim	30	60
VI	78	III		E1 rim	70	65
VI	78	III		E1 rim	60	80
VI	78	III		E1 rim	20	80
VI	78	III		E1 rim	40	65
VI	80	III		E1 rim	60	75
VI	80	III		E1 rim	80	85
VI	80	III		E1 rim	80	75
VI	80	III		E1 rim	40	105
VI	80	III		E1 rim	30	80
VI	80	III		E1 rim	60	85
VI	83	III		E1 rim	30	80
VI	57	II		E2 rim	30	70
VI	60	II		E2 rim	30	170
VI	71	II		E2 rim	40	70
VI	71	II		E2 rim	20	10
VI	71	II		E2 rim	30	100
VI	71	II		E2 rim	40	100
VI	71	II		E2 rim	20	170
VI	11	III		E2 rim	20	75
VI	66	III		E2 rim	50	65
VI	80	III		E2 rim	40	75
VI	42	V	9001	E2 rim	19	75
VI	60	II		E3 rim	30	170
VI	71	II		E3 rim	50	70
VI	71	II		E3 rim	20	55
VI	71	II		E3 rim	60	75
VI	71	II		E3 rim	50	80
VI	71	II		E3 rim	40	75
VI	71	II		E3 rim	30	75
VI	71	II		E3 rim	40	55
VI	71	II		E3 rim	30	70
VI	71	II		E3 rim	20	55
VI	71	II		E3 rim	?	65
VI	71	II		E3 rim	10	170
VIII	1031	II		E3 rim	30	60
VI	11	III		E3 rim	30	10
VI	11	III		E3 rim	40	70
VI	11	III		E3 rim	50	80
VI	11	III		E3 rim	30	65
VI	11	III		E3 rim	30	80
VI	11	III		E3 rim	20	55
VI	11	III		E3 rim	40	55
VI	11	III		E3 rim	22	170
VI	11	III		E3 rim	25	170
VI	12	III		E3 rim	60	75
VI	12	III		E3 rim	20	65
VI	22	III		E3 rim	60	70
VI	66	III		E3 rim	40	70
VI	66	III		E3 rim	50	70
VI	72	III	724	E3 rim	50	80
VI	72	III		E3 rim	40	70
VI	72	III		E3 rim	20	75
VI	72	III		E3 rim	10	170
VI	78	III		E3 rim	50	65
VI	79	III		E3 rim	40	65
VI	35	V	708	E3 rim	55	75
VI	5	VI	9002	E3 rim	15	50
VI	57	II		E4 rim	10	170
VI	71	II		E4 rim	30	180
VIII	1031	II		E4 rim	40	120
VIII	1040	II		E4 rim	20	70
VIII	1050	II		E4 rim	20	75
VI	15	III		E4 rim	50	85
VI	73	III	731	E4 rim	85	110
VI	6	VI	9003	E4 rim	18	130
VI	57	II		E5 rim	20	55
VI	71	II		E5 rim	30	65
VI	71	II		E5 rim	20	60
VI	71	II		E5 rim	20	60
VI	71	II		E5 rim	10	120
VIII	1021	II		E5 rim	90	170
VIII	1021	II		E5 rim	60	160
VIII	1021	II		E5 rim	40	200
VIII	1031	II		E5 rim	80	65
VIII	1031	II		E5 rim	80	55
VIII	1031	II		E5 rim	20	60
VIII	1040	II		E5 rim	20	130
VIII	1044	II		E5 rim	30	170
VIII	1050	II		E5 rim	18	65
VIII	1052	II		E5 rim	30	55
VI	11	III		E5 rim	40	65
VI	11	III		E5 rim	20	60
VI	11	III		E5 rim	20	80
VI	11	III		E5 rim	20	80
VI	11	III		E5 rim	10	110
VI	30	III		E5 rim	20	75
VI	66	III		E5 rim	40	70
VI	66	III		E5 rim	20	55
VI	66	III		E5 rim	15	65
VI	6	VI	9004	E5 rim	18	100
VI	58	V	741	E6 rim	68	65
VI	85	III		E7 rim	10	80
VI	91	III		E7 rim	40	120
VI	58	V	9005	E7 rim	14	110
VIII	1040	II		E8 rim	30	55
VIII	1040	II		E8 rim	30	75
VIII	1035	VI	1109	E8 rim	68	130

8.3.1.1.6 Jar F1, F2 & F3

This form is represented by narrow-mouthed jars with decorated rims. Variant F1 has a scored upper rim with finger impressions on its rim width (Plate 8.3), variant F2 has a scored upper rim and F3 has four protrusions from the rim with four scored lines on the surface of each. These forms were only recovered from mixed levels, 54 examples (2185g) (including Sf 1079), but have close similarities with incised and 'frilled' examples from 'Muslim' layers at the Bala Hisar, for example, nos. 326 and 363 (Wheeler 1962: 81, 85).

Trench	Context	Period	Sf no.	Element	Diam (mm)	Weight (g)
VIII	1010	V	1079	F1 rim	40	100

8.3.1.1.7 Bowl or lamp G2

A small bowl of red coarse ware with an incurved rim, Wheeler published a number of similar examples, one of which he referred to as a 'small cup or lamp... A very long-lived type' (Wheeler 1962: 60). It was dated by Wheeler to around the third century BC (Wheeler 1962: 60), corroborated by the presence of two examples in Period III, however, the presence of a further two examples in wall melt 71, suggests an earlier date of Period II (Figure 8.10). Three sherds of this form (50g) were also recovered from mixed levels.

Trench	Context	Period	S F no.	Element	Diam (mm)	Weight (g)
VI	71	II	9008	G2 rim	80	20
VI	71	II		G2 rim	70	10
VI	66	III		G2 rim	65	10
VI	79	III		G2 rim	55	10
VI	80	III		G2 rim	60	20

8.3.1.1.8 Bowl G1 & G4

Categories G1 and G4 belong to small bowls, part of the same cohort as the G2 variant with the incurved rim. The G1 profile is slightly straighter than the G4 profile, which has a slightly pinched or thinned lip. G1, G4 and G2 all have flat bottoms. G1 and G4 share a very similar profile to No. 173, although without the lower corrugated decoration on the exterior (Wheeler 1962: 64) (Figure 8.10) (Plate 8.3). Some of our G4 examples have a sand application to the exterior below the rim and both types have a variety of minor decoration. Although Wheeler attributes a date of around the third century BC to this example (Wheeler 1962: 63), examples of G1 were recovered from some of the lowest levels of Period II in trench Ch. VI, although not from trench Ch. VIII. G4 was recovered from context 1077 in trench Ch. VIII, which is dated to c. 1050–1380 BC, and appears to mainly be confined to Period II. A further 113 examples (4318g) were recovered from mixed levels.

Trench	Context	Period	Sf no.	Element	Ware	Diam (mm)	Weight (g)
VI	56	I		G1 bowl	Coarse	70	10
VI	57	II		G1 bowl	Coarse	50	20
VI	57	II		G1 bowl	Coarse	65	20
VI	71	II	1018	G1 bowl	Coarse	58	40
VI	71	II		G1 bowl	Coarse	80	20
VI	71	II		G1 bowl	Coarse	70	10
VI	71	II		G1 bowl	Coarse	80	20
VI	71	II		G1 bowl	Coarse	60	10
VI	71	II		G1 bowl	Coarse	60	10
VI	71	II		G1 bowl	Coarse	?	20
VI	1021	II		G1 bowl	Coarse	40	10
VI	71	II		G1 bowl	Coarse	?	10
VI	11	III		G1 bowl	Coarse	70	10
VI	11	III		G1 bowl	Coarse	70	20
VI	12	III		G1 bowl	Coarse	?	40
VI	15	III		G1 bowl	Coarse	70	10
VI	18	III		G1 bowl	Coarse	70	10
VI	34	III		G1 bowl	Coarse	85	20
VI	66	III		G1 bowl	Coarse	?	40
VI	67	III		G1 bowl	Coarse	?	20
VI	72	III		G1 bowl	Coarse	70	10
VI	73	III		G1 bowl	Coarse	65	10
VI	80	III		G1 bowl	Coarse	70	20
VI	93	III		G1 bowl	Coarse	60	15
VI	93	III		G1 bowl	Coarse	50	15
VI	11	III		G1 bowl	Coarse	60	15
VI	12	III		G1 bowl	Coarse	55	15
VI	27	III		G1 bowl	Coarse	60	30
VI	66	III		G1 bowl	Coarse	65	20
VI	66	III		G1 bowl	Coarse	85	20
VI	66	III		G1 bowl	Coarse	65	20
VI	79	III		G1 bowl	Coarse	65	20
VI	57	II	951	G4 rim	Coarse	420	40
VI	57	II		G4 rim	Coarse	500	225
VI	57	II		G4 rim	Coarse	320	40
VI	57	II		G4 rim	Coarse	290	60
VI	57	II		G4 rim	Coarse	460	40
VI	57	II		G4 rim	Coarse	420	40
VI	60	II		G4 rim	Coarse	490	200
VI	60	II		G4 rim	Coarse	420	80
VI	71	II	950	G4 rim	Coarse	470	200
VI	71	II	954	G4 rim	Coarse	390	120
VI	71	II		G4 rim	Coarse	290	140
VI	71	II		G4 rim	Coarse	220	50
VI	71	II		G4 rim	Coarse	310	40
VI	71	II		G4 rim	Coarse	380	120
VI	71	II		G4 rim	Coarse	300	90
VI	71	II		G4 rim	Coarse	460	220
VI	71	II		G4 rim	Coarse	420	210
VI	71	II		G4 rim	Coarse	420	125
VI	71	II		G4 rim	Coarse	420	125
VI	71	II		G4 rim	Coarse	490	140
VI	71	II		G4 rim	Coarse	490	110
VI	71	II		G4 rim	Coarse	460	50
VI	57	II		G4 rim	Coar/sand	38	40
VI	57	II		G4 rim	Coar/sand	320	20
VI	71	II		G4 rim	Coar/sand	370	40
VI	71	II		G4 rim	Coar/sand	280	25
VI	71	II		G4 rim	Coar/sand	290	30
VIII	1040	II		G4 rim	Coarse	130	80
VIII	1077	II		G4 rim	Coarse	180	220
VIII	1077	II		G4 rim	Coarse	180	80
VIII	1077	II		G4 rim	Coarse	175	60
VIII	1077	II		G4 rim	Coarse	140	60
VIII	1077	II		G4 rim	Coarse	150	100
VIII	1077	II		G4 rim	Coarse	170	100
VIII	1077	II		G4 rim	Coarse	135	80
VI	30	III		G4 rim	Coarse	390	60
VI	72	III		G4 rim	Coarse	380	130
VI	47	III		G4 rim	Coar/sand	290	20

8.3.1.1.9 Bowls G3 & G3A

Category G3 is part of the cohort of small bowls represented by G1, G2 and G4. It is differentiated because its base shape is unclear and its body is more constricted, almost globular, and its rim is pinched into a point (Figure 8.10). It shares a similar profile to Wheeler's No. 140 (Wheeler 1962: 61). Wheeler attributes a date of around the third century BC to this example (Wheeler 1962: 62), but examples of G3 were recovered from some of the lowest levels of Period II in trench Ch. VI, although somewhat higher in the Period II sequence in trench Ch. VIII. A further 71 examples weighing 1866g were recovered from mixed levels. Variant G3a has a similar form but its rim is clubbed, similar to Wheeler's example 141 and 142 (Wheeler 1962: 61) (Figure 8.11). All the 17 examples (318g) were from mixed levels.

Trench	Context	Period	Sf no.	Element	Ware	Diam (mm)	Weight (g)
VI	57	II		G3 bowl	Coarse	170	30
VI	57	II		G3 bowl	Coarse	100	35
VI	57	II		G3 bowl	Coarse	120	20
VI	57	II		G3 bowl	Coarse	150	35
VI	57	II		G3 bowl	Coarse	190	20
VI	57	II		G3 bowl	Coarse	170	20
VI	60	II		G3 bowl	Coarse	260	20
VI	60	II		G3 bowl	Coarse	230	20
VI	71	II	756	G3 bowl	Coarse	40	20
VI	71	II		G3 bowl	Coarse	40	10
VI	71	II		G3 bowl	Coarse	40	10
VI	71	II		G3 bowl	Coarse	40	10
VI	71	II		G3 bowl	Coarse	55	20
VI	71	II		G3 bowl	Coarse	45	20
VI	71	II		G3 bowl	Coarse	50	15
VI	71	II		G3 bowl	Coarse	40	10
VI	71	II		G3 bowl	Coarse	60	10
VI	71	II		G3 bowl	Coarse	170	25
VI	71	II		G3 bowl	Coarse	170	25
VI	57	II		G3 bowl	Coar/sand	170	20
VI	11	III		G3 bowl	Coarse	130	20
VI	15	III		G3 bowl	Coarse	45	10
VI	66	III		G3 bowl	Coarse	65	10
VI	72	III		G3 bowl	Coarse	65	10
VI	73	III		G3 bowl	Coarse	45	10
VI	78	III		G3 bowl	Coarse	50	20
VI	78	III		G3 bowl	Coarse	?	10
VI	80	III		G3 bowl	Coarse	30	10
VI	80	III		G3 bowl	Coarse	30	10
VI	71	II		G3 bowl	Coarse	55	10
VIII	1034	II		G3 bowl	Coarse	175	80

8.3.1.1.10 Carinated 'Indic' bowls with everted rims G5 & G8

Wheeler dated this group of carinated bowls between 550 and 200 BC on account of their clear similarities with similar forms at Hastinapura in Period II (Wheeler 1962: 40). As a corpus, these vessels are identified by being shallow with an everted rim with a sharp, distinct carination below it (Wheeler 1962: 40), G5 has a slightly weaker carination than form G8. They are generally identified by scholars as part of an 'Indic' tradition which penetrates the northern valleys in the middle of the first millennium BC (Vogelsang 1992: 246). Eight sherds of carinated 'Indic' bowls were recovered (230g) four from period III and four from period II. Certainly, the Period III sherds would support such a hypothesis as they were recovered from the upper fills of ditch 55, which dates to c. 770–410 BC. However, the two Period II sherds were recovered from the fills of cut 61, dated to c. 1270–930 BC. Rather than being out of context, these sherds are roughly chronologically comparable with Period II of Hastinapura, although they are absent from the lowest levels from trench Ch. VIII. It should be noted that Wheeler recovered examples from layers in trench Ch. III, which he assumed to be equivalent to Ch. I layer 50, close to the base layer of 51 (Wheeler 1962: 86) and putting the lateness of the 'Indic' horizon into question, at least in the Vale of Peshawar. A further 62 sherds of this bowl form (2033g) were recovered from the mixed layers of Periods V & VI (Figure 8.9). Other ceramics of an 'Indic' flavour include dish L10 and Q5.

Trench	Context	Period	SF no.	Element	Diam (mm)	Weight (g)
VI	57	II		G5 rim	150	10
VI	57	II		G5 rim	150	10
VI	67	III	957	G5 rim	170	25
VI	72	III		G5 rim	155	80
VI	71	II	969	G5 rim	80	25
VIII	1040	II		G5 rim	90	20
VI	66	III		G5 rim	80	40
VI	66	III	968	G5 rim	70	20
VIII	1015	V	9006	G8 rim	90	50
VIII	1007	V	9007	G8 rim	85	20

8.3.1.1.11 Bowl G6

Two examples of globular bowl G6 were recovered from trench Ch. VI, one from Period II and one from Period III. The profile of this thin-walled and long vessel has a long tradition at the Bala Hisar and is shared by many of the beakers of Red Burnished Ware (Figure 8.11). A further 3 examples (100g) were recovered from mixed levels.

Trench	Context	Period	SF no.	Element	Diam (mm)	Weight (g)
VI	71	II	960	G6 rim	280	120
VI	72	III	958	G6 rim	160	100

8.3.1.1.12 Trough L6

A single example of trough L6 was recovered from the trampled surface of the natural (56) at the base of trench Ch. VI. This vessel has a diameter of 160mm and is made of a very coarse mixture of clay, grit and vegetable matter, and was poorly fired (Figure 8.12). Its diameter is emphasised by the low and thick nature of its walls. The closest analogy are nos. 2 & 3 from Period III levels at Balambat (Dani 1967: 254). The example from Ch. VI dates to between 1270–930 BC. A further 15 examples (3482g) were recovered from mixed levels.

Trench	Context	Period	SF no.	Foot diam (mm)		Weight (g)
VI	56	I		160	240	
VI	58	V	888	190	342	

8.3.1.1.13 'Indic' dish L10

Shallow, flat-bottomed dishes with roughly vertical but convex sides with inturned upper ends were identified by Wheeler as one of the significant reoccurring types present within the Charsadda assemblage (Wheeler 1962: 40) (Figure 8.11) (Plate 8.4). Wheeler dates it to c. 550–100 BC (Wheeler 1962: 40) and it is identified as part of the 'Indic' tradition of the middle of the first millennium BC (Vogelsang 1988). Certainly these forms are well known from the Painted Grey Ware tradition of the Ganges Valley and the 10 in-situ examples from Charsadda are mostly found within Period II, although it should be noted that they are within the upper part of Period II. A further 232 examples (11192g) were recovered from mixed levels.

Trench	Context	Period	SF no.	Diam (mm)	Weight (g)
VI	71	II		?	40
VIII	1021	II.D		150	40
VIII	1021	II.D		140	90
VIII	1021	II.D		140	30
VIII	1031	II.D		80	18
VIII	1034	II.D		100	40
VIII	1037	II.D		125	70
VIII	1040	II.D		155	50
VIII	1055	II.C		90	30
VI	15	III		90	30
VI	58	V	1010	110	70
VIII	1010	V	1099	130	130
VIII	1046	V	1098	170	120
VIII	1053	V	1100	150	120
VIII	1079	V	2020	85	220

8.3.1.1.14 Grooved jar O1 & O2

There are two variants of this form, variant O1 with a thickened rim and variant O2 with a thickened, bowed rim and inturned top (Figure 8.12) (Plate 8.4). Variant 1 has analogies with Charsadda example 279 and Variant 2 with example 280 (Wheeler 1962: Figure 32). Wheeler dated both these forms to around the first century BC and second century AD (Wheeler 1962: 73). Although two examples of O1 were recovered from Period III, the remaining six examples came from Period II, although most from the upper levels. A further 247 examples (23827g) were recovered from mixed levels.

Trench	Context	Period	SF no.	Element	Diam (mm)	Weight (g)
VI	60	II		O1 rim	230	80
VI	71	II		O1 rim	500	260
VI	71	II		O1 rim	260	25
VI	72	III		O1 rim	500	140
VI	15	III	898	O1 rim	360	260
VI	60	II		O2 rim	330	110
VIII	1021	II		O2 rim	390	180
VIII	1056	II		O2 rim	175	90
VI	35	V	806	O1 rim	380	180
VI	41	V	831	O1 rim	340	65
VI	7	VI	902	O2 rim	280	80
VI	7	VI	903	O2 rim	270	60

8.3.1.1.15 Jar O3

Two examples of jar form O3 were recovered from in-situ levels at the Bala Hisar of Charsadda, both from Period III. It has an everted rim with a smaller inward protrusion and a small external ridge at the neck (Figure 8.12). Wheeler also recovered this form (1962: Figure 29, No. 240) and dated it to around the second century BC (1962: 70). Our examples date in the region of c. 770–370 BC. A further 12 examples (1150g) were recovered from mixed levels.

Trench	Context	Period	SF no.	Diam (mm)	Weight (g)
VI	34	III		460	60
VI	95	III		440	50
VI	54	V	905	200	100

8.3.1.1.16 Grooved jar O5

Grooved jar O5 is again a similar form but has a more vertical wall, which is slightly thickened into a rim with an inturned top (Plate 8.4). It has a slightly later position within the sequence as indicated by its position within contexts of Period III, especially within the fill of ditch 55 with a date of c. 770–410 BC. A further 28 examples (2350g) were recovered from mixed levels.

Trench	Context	Period	Sf no.	Diam (mm)	Weight (g)
VI	32	III		290	120
VI	72	III		410	280
VI	54	V	910	500	100

8.3.1.1.17 Pot P1 & P2

Five examples (320G) of Pot form P were recovered from in-situ archaeological deposits at the Bala Hisar of Charsadda. Two variants were identified from these examples: P1, a T-shaped rim, and P2, a short everted rim (Plate 8.4). Variant P1 has no early analogies but Variant P2 is similar to Wheeler's example 57, described as a 'sharply everted rim' (Wheeler 1962: 51). Wheeler dated example 57 to between the fourth and third century BC (Wheeler 1962: 51). Variant P2 is also found at Aligrama (Stacul & Tusa 1977: 196 No. d) and dated to 'Maurya' levels (ibid. 184). P1 was only found in context 71, a context which may include some mixed materials, whilst P2 was found throughout the sequence of trench Ch. VIII, not altogether surprising as it has clear analogies with the form of Charsadda's 'Rippled Rim'. A further 132 examples (8700g) were recovered from mixed levels.

Trench	Context	Period	Sf no.	Element	Diam (mm)	Weight (g)
VI	71	II		P1 rim	110	40
VI	71	II	935	P2 rim	90	40
VI	1021	II	1107	P2 rim	105	140
VIII	1031	II		P2 rim	100	60
VIII	1070	II		P2 rim	70	40
VI	35	V	931	P1 rim	70	100
VI	35	V	932	P2 rim	100	50

8.3.1.1.18 Bowl Q1 & Q2

In addition to the two sherds of Red Burnished Ware from Period II (Section 8.2.1.9), examples of bowl Q1 were also found in red coarse ware. A total of 12 examples (1210g) were recovered from Periods II and III of the Bala Hisar. Some of these examples were direct contemporaries with the specimens in Red Burnished Ware, but were also present in the upper levels of trench Ch. VIII's Period II. As noted above, the profile of Q1 is extremely similar to No. 29 from Charsadda (Wheeler 1962: 49) and similar to No.c from the Swat Valley (Stacul 1966: 75) (Figure 8.12). Form Q2 belongs to a similar vessel form and is differentiated by having a less pinched top to its rim and fewer external decorations, it was also recovered from the lower levels of Period II. A further 126 examples (12073) were recovered from mixed levels.

Trench	Context	Period	Sf no.	Element	Diam (mm)	Weight (g)
VI	71	II	943	Q1 rim	520	260
VI	71	II		Q1 rim	?	40
VIII	1021	II		Q1 rim	180	90
VIII	1021	II		Q1 rim	180	180
VIII	1021	II		Q1 rim	170	70
VIII	1021	II		Q1 rim	170	70
VIII	1021	II		Q1 rim	100	30
VIII	1037	II		Q1 rim	175	50
VIII	1055	II		Q1 rim	120	60
VIII	1064	II		Q1 rim	180	160
VI	66	III		Q1 rim	?	80
VI	72	III		Q1 rim	480	120
VIII	1064	II		Q2 rim	175	160
VIII	1064	II		Q2 rim	165	130
VIII	1082	II		Q2 rim	490	1160

8.3.1.1.19 Tray/dish Q4 & Q5

Shallow, flat-bottomed dishes with roughly vertical sides with rounded upper ends; variant Q4 is smaller in diameter and has a less steep rise whilst Q5 has near vertical sides (Figure 8.13). Both have analogies with Wheeler's catalogue No. 367 (Wheeler 1962: 84) and we are similarly unable to estimate rim diameter. Examples came from Period II and III, the lower levels of trench Ch. VI and the upper levels of trench Ch. VIII. A further 32 examples (3494g) were recovered from mixed levels.

Trench	Context	Period	Sf no.	Element	Diam (mm)	Weight (g)
VI	60	II.A		Q5 rim	260	30
VIII	1037	II.D	1093	Q4 rim	135	290
VI	72	III	9009	Q5 rim	200	50
VI	72	III		Q5 rim	170	40
VI	72	III	9010	Q5 rim	200	35

8.3.1.1.20 Jars S1–4

Category S1 is a jar neck with analogies with No. 182 from Wheeler's excavations and allocated by him to between the third and second century BC (1962: 63) and category S3 has analogies with No. 193 from the second century BC (ibid.) (Figure 8.13) (Plates 8.4 & 8.5). Categories S2 and S4, however, comprises miniature jars and vessels recovered from trenches III, VI and VIII, all from disturbed contexts. All were made of a red coarse ware and had diameters of 7cm. Sf 1140 is distinctly handmade, beehive-shaped without a rim and was decorated with a line of small holes around its exterior, Sf 1022 is also handmade, rimless and beehive-shaped, Sf 1019 was globular and handmade whilst Sfs 5 & 1139 are handmade and have distinct carinations (Plates 8.4 & 8.5). Handmade miniature pots are known from the Swat Valley, for example, Tusa has published some examples from Aligrama Period V, which are very similar to Sfs 1140 & 1022, and believes them to have been used as 'containers for coagulating substances used in the treatment of milk and its by-products' (Tusa 1979:687). They are also known from Swat Valley Period IV at the site of Loebanr 3 (Stacul 1987: 86), and have even been reported from the lowest levels of the Bhir Mound and Sirkap, and interpreted as 'children's playthings' or 'for cosmetics' (Marshall 1951: 426-7).

Trench	Context	Period	Sf no.	Element	Diam (mm)	Weight (g)
VI	72	III	1005	S1	40	10
VI	57	II.A		S1	50	35
VI	57	II.A		S1	40	10
VI	58	II.A		S1	40	25
VI	71	II.A	1023	S1	30	50
VIII	1021	II.B		S3	20	60
VIII	1021	II.B		S1	60	20
III	1	VI	5	S2 mini	7	12
VIII	58	V	1022	S4 mini	7	10
VIII	1006	V	1139	S2 mini	?	10
VIII	1010	V	1140	S4 mini	7	35
VI	64	V	1019	S2 mini	15	14
VI	58	II.A	1021	S3	30	110

8.3.1.1.21 Perforated vessel T

Three sherds of perforated vessels were recovered from the excavations at the Bala Hisar. Sfs 502 and 245 were from mixed levels but indistinct rim sherd Sf 497 was recovered from context 66, the fill of Period III ditch 55 (Plate 8.6). Wheeler did not recover this category of ceramic from the Bala Hisar (1962) but Marshall pub-

lished a variety of perforated vessels and strainers from Sirkap (1951: Plates 124 & 125), although none are similar to Sf 497. Similarly, a large pierced or perforated vessel was recovered from 'Achaemenian' levels at Balambat (Dani 1967: 256) and another from Aligrama (Stacul & Tusa 1977: 187), but both have a very different form. Sf 497's shape has more in common with the Harappan perforated jars, which are thought to have been wrapped in cloth and used as a strainer for the preparation of fermented beverages (Kenoyer 1998: 154). Our in-situ example, dating to c. 770–410 BC, may have had a similar function.

Trench	Context	Period	Sf no.	Weight (g)
VI	66	III	497	28.1
VI	69	V	502	20
III	1	VI	245	99

8.3.1.2 Bases

8.3.1.2.1 Dish on stand/short pedestal H1 & H2

Although this form has already been discussed and illustrated in Burnished Red Ware (Section 8.2.1.7), 59 examples (4750g) of a coarse ware version were also recovered from mixed levels.

8.3.1.2.2 Pedestal vessels H3 & H4

Although this form has already been discussed and illustrated in Burnished Red Ware (Section 8.2.1.6), 13 examples (2000g) of a coarse ware version were also recovered from mixed levels.

8.3.1.2.3 Flat-bottomed base L1

Category L1 represents the one of the largest in-situ categories of bases with 73 examples (2837g). The base is flat and the body rises directly from the edge of the base (Figure 8.14). This profile has analogies with No. a from Period IV of Loebanr 3 (Stacul 1987: 83), nos 13 and 15 from Zarif Karuna (Khan 1973: 37) and No. 7 from Timargarha (Dani 1967: 135). It is evident in both Periods II and III at the Bala Hisar and has been found in early levels in trenches Ch. VI and VIII, with dates of c. 1310–1050 BC. An additional 751 examples (23426g) were recovered from mixed levels.

Trench	Context	Period	Sf no.	Foot diam (mm)	Weight (g)
VI	57	II		15	40
VI	57	II		20	20
VI	57	II		30	38
VI	60	II		30	45
VI	60	II		20	25
VI	60	II		20	28
VI	60	II		25	18
VI	60	II		15	25
VI	62	II		60	20
VI	62	II		25	90
VI	71	II		25	30
VI	71	II		40	45
VI	71	II		30	18
VI	71	II		10	10
VI	71	II		10	10
VI	71	II		20	18
VI	71	II		20	30
VI	71	II		20	38
VI	71	II		20	40
VI	71	II		25	60
VI	71	II		25	10
VI	71	II		20	20
VI	71	II		45	28
VI	71	II		20	18
VI	71	II		20	15
VI	71	II		20	20
VI	71	II		20	18
VIII	1021	II		10	20
VIII	1021	II		20	50
VIII	1021	II		25	20
VIII	1021	II		20	10
VIII	1021	II		40	160
VIII	1021	II		35	210
VIII	1021	II		40	40
VIII	1021	II		20	40
VIII	1030	II		25	60
VIII	1032	II		25	30
VIII	1034	II		25	100
VIII	1036	II		20	30
VIII	1042	II		15	20
VIII	1069	II		25	20
VIII	1069	II		20	20
VIII	1069	II		20	40
VIII	1069	II		10	40
VI	15	III		30	40
VI	15	III		30	40
VI	15	III		30	30
VI	15	III		30	20
VI	16	III		20	20
VI	25	III		20	20
VI	25	III		20	25
VI	28	III		15	65
VI	32	III		30	15
VI	47	III		35	20
VI	48	III		25	20
VI	66	III		20	45
VI	66	III		25	120
VI	66	III		25	100
VI	66	III		25	30
VI	66	III		20	30
VI	66	III		25	35
VI	72	III	866	200	30
VI	72	III		15	25
VI	72	III		20	20
VI	72	III		30	80
VI	72	III		25	30
VI	78	III		20	40
VI	78	III		30	30
VI	79	III		25	40
VI	79	III		30	60
VI	85	III		20	90
VI	85	III		35	10
VI	85	III		30	20
VI	7	VI	804	40	40
VIII	183	V	805	80	25

8.3.1.2.4 Low pedestal base L2

Ten examples of L2 (1100g), a base formed by a low pedestal, were recovered from in-situ levels at the Bala Hisar of Charsadda (Figure 8.14). The profile of this base has a number of analogies with Gandharan Grave sites within the region, for example, Zarif Karuna Type XIV (Khan 1973: 47). It has been recovered from some of the lowest contexts in trench Ch. VI, trampled into the natural, and from near the base of the sequence in Ch. VIII with dates to c. 1310–1050 BC. A further 34 examples (2948g) were recovered from mixed levels.

Trench	Context	Period	Sf no.	Foot diam (mm)	Weight (g)
VI	56	I		30	180
VI	71	II		30	180
VI	71	II		25	80
VI	71	II		60	160
VIII	1054	II		25	100
VIII	1054	II		30	80
VIII	1054	II		30	100
VIII	1064	II		30	80
VIII	1077	II		25	60
VI	47	III		30	80
VI	7	VI	876	60	200
VI	46	V	9011	50	80

8.3.1.2.5 Ring-footed base L3

Six examples of category L3 (310g), ring-footed bases, were recovered from the excavations at the Bala Hisar of Charsadda (Figure 8.14). It has few analogies with early levels in the region and its similarity with No. 2 from Period III of the Bhir Mound (Sharif 1969: Figure 19) is refuted by its early date in context 1077, c. 1050–1310 BC. A further 22 examples (1019g) were recovered from mixed levels.

Trench	Context	Period	Sf no.	Foot diam (mm)	Weight (g)
VI	57	II		50	80
VIII	1021	II		35	30
VIII	1054	II		45	20
VIII	1069	II		20	20
VIII	1077	II		20	40

VI	73	III	925	40	120
VI	46	V	878	50	80
VI	7	VI	877	70	60

8.3.1.2.6 Disc-bottomed base L4

A total of 51 examples (6070g) of this category, the disc-bottomed base, were recovered from the Bala Hisar of Charsadda (Figure 8.14). It was only recovered from Period II contexts within trenches Ch. VI and VIII and may be dated in trench Ch. VI to c. 1270–930 BC and in trench Ch. VIII to c. 1310–1050 BC. This profile has many analogies, mainly with vessels of globular shape with out-turned rims such as No. 21 from Zarif Karuna (Khan 1973: 42), No. f (Stacul 1966: 70) or any of the complete rippled rim examples from Timargarha (Dani 1967: 125, no .40). A further 59 examples (6440g) were recovered from mixed levels.

Trench	Context	Period	Sf no.	Foot diam (mm)	Weight (g)
VI	57	II		40	45
VI	57	II		50	80
VI	57	II		30	100
VI	57	II		40	200
VI	57	II		30	80
VI	57	II		40	80
VI	57	II		65	190
VI	71	II		25	60
VI	71	II		30	100
VI	71	II		40	80
VI	71	II		45	65
VI	71	II		85	520
VI	71	II		50	290
VI	71	II		50	80
VI	71	II		40	140
VI	71	II		45	80
VI	71	II		45	80
VI	71	II		40	120
VI	71	II		30	100
VIII	1021	II		20	160
VIII	1047	II		20	100
VIII	1054	II		40	100
VIII	1056	II		30	120
VIII	1056	II		35	140
VIII	1056	II		35	120
VIII	1064	II		30	180
VIII	1064	II		45	140
VIII	1077	II		35	160
VIII	1077	II		45	180
VIII	1077	II		40	200
VIII	1077	II		50	120
VIII	1077	II		20	40
VIII	1077	II		40	100
VIII	1077	II		15	60
VIII	1077	II		40	60
VIII	1077	II		50	220
VIII	1077	II		45	100
VIII	1077	II		45	100
VIII	1077	II		30	80
VIII	1077	II		50	160
VIII	1077	II		60	140
VIII	1077	II		25	80
VIII	1077	II		50	140
VIII	1077	II		40	80
VIII	1077	II		30	80
VIII	1077	II		25	120
VIII	1077	II		30	60
VIII	1077	II		30	80
VIII	1077	II		40	100
VIII	1077	II		40	60
VI	42	V	880	45	160

8.3.1.2.7 Round-bottomed base L5

A total of 39 examples (1928g) were recovered from the Bala Hisar of Charsadda, all but nine from Period II. The profile is of a rounded bottom with a more flattened section forming the base (Figure 8.14). No example is full enough to allow us to propose analogies, but its earliest presence is in ditch fill 57 with a date of the first millennium BC, a date supported by its presence in context 1077 of trench Ch. VIII. A further 244 examples (14605g) were recovered from mixed levels.

Trench	Context	Period	Sf no.	Foot diam (mm)	Weight (g)
VI	57	II		35	200
VI	60	II		40	40
VI	71	II		35	40
VI	71	II		30	40
VI	71	II		70	30
VI	71	II		50	60
VI	71	II		75	40
VI	71	II		40	20
VI	71	II		40	40
VI	71	II		?	40
VIII	1021	II		20	70
VIII	1021	II		25	70
VIII	1021	II		25	30
VIII	1021	II		25	30
VIII	1034	II		30	60
VIII	1034	II		50	80
VIII	1040	II		25	25
VIII	1040	II		40	150
VIII	1040	II		25	60
VIII	1040	II		25	50
VIII	1040	II		25	50
VIII	1040	II		25	50
VIII	1040	II		30	60
VIII	1040	II		20	60
VIII	1040	II		20	30
VIII	1069	II		20	40
VIII	1077	II		50	100
VI	15	III		110	60
VI	32	III		15	20
VI	72	III		25	18
VI	72	III		90	20
VI	72	III		45	40
VI	73	III		?	60
VI	78	III		40	80
VI	79	III		90	30
VI	79	III		120	35
VIII	1010	V	1053	30	130
VIII	1035	VI	1054	30	100

8.3.1.2.8 Undiagnostic bases L7

A total of 86 bases (11255g) were too incomplete to attribute specific forms.

8.3.1.3 Lids

8.3.1.3.1 Lid J1

Three in-situ lid fragments were recovered from the recent excavations at the Bala Hisar, from Period II. They have been identified as variant J1, a flat-bottomed lid with raised sides and a central rounded knob (Plate 8.7). A further 45 examples (2210g) were recovered from mixed levels.

Trench	Context	Period	Sf no.	Weight (g) Gm
VI	56	I		20
VI	71	II	531	19
VIII	1021	II		12.2
VIII	1014	V	1035	50

8.3.1.3.2 Lid J2

Lid variant J2 was only recovered from mixed levels and is a flat-bottomed lid with a pronounced carinated handle with similarities to example No. 321 dated to c. 2nd–4th century AD (Wheeler 1962: 79) (Plate 8.7). A total of 24 examples (1800g) were recovered from mixed levels.

Trench	Context	Period	Sf no.	Weight (g)
VI	58	V	841	100

8.3.1.3.3 Lid J3

Lid variant J3 was only recovered from mixed levels and is a flat-bottomed lid with a cone-shaped handle with similarities to example No. 298 dated to c. 1st–2nd century AD (Wheeler 1962: 77) (Plate 8.7). A total of 12 examples (561g) were recovered from mixed levels.

Trench	Context	Period	Sf no.	Weight (g)
VI	42	V	844	30

8.3.1.3.4 Lid J4

Lid variant J4 is represented by a single example from Phase II. When it was first excavated, it was mistaken for a short pedestal vessel but later reclassified as a lid with a

massive handle measuring 60mm across and with a total height of 86mm (Plate 8.7). It has no know analogies within Wheeler's published corpus.

Trench	Context	Period	Sf no.	Weight (g)
VI	71	II	531	210

8.3.1.3.5 Lid J5

A single example of lid variant J5 was recovered from mixed levels. It has a flat-bottomed lid with a disc-like handle with no known analogies within Wheeler's published corpus (Plate 8.7).

Trench	Context	Period	Sf no.	Weight (g)
VI	7	VI	480	50

8.3.1.4 Lugs & handles

8.3.1.4.1 Lugs K1, K2, K3 & K6

Georgio Stacul has suggested that vessels with lugs and handles form part of the new assemblage of Swat Period VII, along with iron metallurgy and stone beehive spindle-whorls (Stacul 1995: 124) and dates their appearance to the middle of the first millennium BC. It should be noted, however, that lugged vessels have been reported from the Gandharan Grave cemeteries of Loebanr I, and Butkara II (Stacul 1966: Figure 30) and Timargarha (Dani 1967: 150), suggesting a greater antiquity for this element. A total of 11 fragments of vessel with lugs (1325g), all coarse ware, were recovered from in-situ levels within trenches Ch. III, VI and VIII at the Bala Hisar. Of these, only three were recovered from Period III (150g), the remainder from site Period II. A further 56 examples (3290g) were recovered from mixed levels. Four variants were present: K1, a basic lug; K2, a basic lug with finger impression in its centre; K3, a pierced lug; and K6, a basic lug attached to the upper part of the vessel rather than its body (Plate 8.7). Mudbrick wall fill 71 contained the largest count and weight with 7 examples (955g), and may be dated to c. 1260–900 BC. This date is corroborated by the recovery of an example from a plaster floor sealed by an old land surface with a date of c. 1190–990 BC. All three variants were present from Period II onwards, although there is some debate as to the nature of context 71. In conclusion, it appears that Stacul's dating is too young, and it is very clear that such elements were all ready present within the region at the beginning of the first millennium BC.

Trench	Context	Period	Sf no.	Element	Length (mm)	Width (mm)	Weight (g)
VI	71	II	910	K1 lug	90.7	?	220
VI	71	II		K1 lug	110	23	410
VI	71	II		K1 lug	63	21.1	110
VIII	1039	II.C		K1 lug	50.6	?	220
VI	71	II		K2 lug	51.9	20	95
VI	71	II		K2 lug	61.7	14.5	60
III	76	III	914	K2 lug	75.7	19.6	90
VI	71	II		K3 lug	?	20.4	40
VI	71	II		K3 lug	?	17.5	20
III	15	III		K3 lug	?	16.6	20
III	34	III		K3 lug	?	21.4	40
VI	7	VI	912	K3 lug	72	34.1	80
VI	43	V	916	K3 lug	61	14.6	100
VIII	1010	V	1092	K6 lug	53.9	?	310

8.3.1.4.2 Anthropomorphic lugs

Five examples of animal handles/lugs were found, unfortunately all from disturbed contexts. One represents a human head and the other three rams, the latter being very similar to the examples published by Wheeler and dated to before the second century BC (Wheeler 1962: 113) (Plate 8.7).

Trench	Context	Period	Sf no.	Element	Weight (g)
VI	7	VI	101	Ram	78
VIII	1015	V	850	Ram	25.2
VI	41	V	1335	Ram	37.3
VI	1015	V	1106	Human?	28.1

8.3.1.4.3 Handles K4 & K5

Both these variants were recovered from mixed levels, K4 is cylindrical in cross-section and K5 more strap-like (Plate 8.7). A total of 67 examples (2534g) were recovered.

Trench	Context	Period	Sf no.	Element	Diam (mm)	Weight (g)
VIII	1014	V	1041	Handle K4		140
VIII	1012	V	1043	Handle K5	28.6	10

8.3.1.5 Spouts

8.3.1.5.1 Spouts I1 & I2

Form I1 is a straight tapered spout, whilst I2 has a slight lip where it meets the lower body of the vessel, the latter is also of coarse ware with black paint and I3 has lines running down the spout and possibly eyes (Plate 8.8). Wheeler only encountered spouts in the upper levels of Ch. I, and he dated them to between the second and fourth century AD (Wheeler 1962: 77). Despite the presence of earlier examples, such vessels are generally absent from cemetery sites but were present at Balambat amongst Dani's 'Achaemenian' pottery (Dani 1967: Figure 57, No. 21). This suggests that they are a relatively late phenomenon, as also suggested by Vogelsang (1992: 246), who allocated them to Swat Period VII. Such a late date is supported by the presence of an spout with black decoration in the fill of ditch cut 2, which has a date of c. 770–410 BC and suggests that some elements of wall melt 71 may be redeposited. A further 25 examples (955g) were recovered from mixed levels.

Trench	Context	Period	Sf no.	Element	Diam (mm)	Weight (g)
VI	71	II		I1 spout	43	60
III	17	III		I2 spout	40.5	1
VI	7	VI	826	I1 spout	58.2	30
VIII	1012	V	1046	I2 spout	70.3	60
VIII	1015	V	1048	I3 spout	65.3	50

8.3.1.5.2 Spout I4

Recovered only from mixed contexts, spout I4 is a plain straight spout, unlike the tapered form of I1 (Plate 8.8). A total of 20 examples (610g) were recovered.

Trench	Context	Period	Sf no.	Diam (mm)	Weight (g)
VIII	1018	V	1049	78.2	70

8.3.1.5.3 Zoomorphic spout I5

A single example of a zoomorphic spout was recovered from mixed contexts. The animal head spout appears to be a boar and has limited analogies with late zoomorphic spout No. 341 published by Wheeler (1962: 80) (Plate 8.8).

Trench	Context	Period	Sf no.	Measurements (mm)	Weight (g)
VI	7	VI	131	47x4x5	40

8.3.1.6 Miscellaneous and modified sherds

8.3.1.6.1 Ceramic wheels

In addition to the three terracotta wheels recovered from the excavations (Section 12.3.15), vessel sherds were also reshaped and modified into wheels. Whilst we have already discussed an example of Burnished Red Ware (Section 8.2.1.9), a total of 10 examples were recovered

from the recent excavations at the Bala Hisar. Two were in situ and were recovered from trenches Ch. VI and VIII, both from within Period II levels. Sf 1221 was recovered within the mortar of clay slab wall 1049 and Sf 346 from the fill of pit/ditch cut 61, the former is sealed by a level with a date of c.1190–990 BC and the latter has a date of between c. 1270–930 BC. Their presence in levels of some antiquity is somewhat surprising as we did not recover pierced animals or cart parts from in-situ contexts at Charsadda, however, it should be noted that a terracotta bull with pierced legs for wheels were recovered from the nearby Gandharan Grave cemetery of Zarif Karuna (Khan 1973: 62) and a similar wheel from the graves at Balambat (Dani 1967: 248). A further 8 coarse ware examples (238.2g) were recovered from mixed levels.

Trench	Context	Period	Sf no.	Ware	Diam	Hole (mm)	Weight (g)
VIII	1049	II	1221	Coarse/sand	7	0.8	30.9
VI	57	II	346	Coarse	4.3	0.9	19.3

8.3.1.6.2 Zoomorphic vessel

Sf 496 was recovered from the fills of ditch cut 55, which has a date of c. 770–410 BC. Its partial shape makes it extremely difficult to reconstruct its original form but it appears to have been a thick walled vessel with a moulded, possibly zoomorphic exterior (Plate 8.9). It has no analogies and it is impossible to suggest its function.

Trench	Context	Period	Sf no.	Dimension (mm)	Weight (g)
VI	66	III	496	73x43x0.8	51.5

8.3.1.6.3 Oil lamps

Four open oil lamps were recovered from the excavations at the Bala Hisar but all were from mixed levels (Plate 8.9). They are in addition to steatite lamp Sf 860 (Section 11.4) and possible lamp form G2 (Section 8.3.1.1.7).

Trench	Context	Period	Sf no.	Weight (g)
III	1	VI	244	32
VIII	1010	V	762	45
VIII	1019	V	859	61
VI	64	V	439	74

8.3.1.6.4 Votive tanks

Seven fragments belonging to votive tanks were recovered from Trenches Ch. III, VI and VIII. Three of these fragments were lamps set into the rims of the tanks (Sfs 1338, 526 & 823), two were fragments of the circular tank walls with undiagnostic animals/birds attached (Sfs 823 & 134) one was a frog from the base of a tank (Sf 274) and one a bird from the base (Sf 38) (Plates 8.9 & 8.10). No examples were reported by Wheeler or Dani from their excavations at Charsadda (Wheeler 1962; Dani 1966), but Marshall reported similar circular tanks from the Bhir Mound and Sirkap and attributed a date of between the second and third centuries BC (Marshall 1951: 463). As noted else, they may represent a broad affiliation to a naga cult, but have been found in Buddhist religious sanctuaries in Sirkap (Coningham 2000).

Trench	Context	Period	Sf no.	Element	Weight (g)
III	1	VI	274	Frog	32
VI	35	VI	1138	Lamp	17
VIII	1003	V	823	Lamp	19.4
III	1	VI	134	Tank	25.2
VI	35	V	132	Tank	43.9
III	1	VI	526	Lamp	21
III	1	VI	38	Bird	11.7

8.3.1.6.5 Potters' konoras

Two ceramic *konoras* or dabbers were recovered from mixed levels in trenches Ch. VI and III, they are similar in form to those from Wheeler's excavations at the Bala Hisar (Wheeler 1962: 119) as well as from Shaikhan Dheri (Dani 1966: 121) and Taxila (Marshall 1951: 424). They were used to thin the walls of ceramic vessels and have a hole for the insertion of a stick if the vessel is too deep. Sf 192 has a decoration of horizontal lines down its lower half, whilst Sf 2011 has two lines running around its 'waist' and a further two incised lines running at right angles over its upper surface (Plate 8.10).

Trench	Context	Period	Sf no.	Diam (mm)	Weight (g)
III	1	VI	2011	13	55
VI	35	V	192	16	60

8.3.1.6.6 Incense stick stand?

Damaged Sf 567 was recovered from the mixed backfill of Wheeler's trench III. It was crudely made of clay and comprises a circular base enclosed by a perforated clay dome. Although we have tentatively identified it as an incense stick stand, we have been unable to find analogies at Taxila, Charsadda or Shaikhan Dheri (Plate 8.11).

Trench	Context	Period	Sf no.	Diam (mm)	Weight (g)
III	1	VI	567	50	20

8.4 POTTER'S MARKS AND INSCRIPTION

Vessels bearing one inscription (Sf 1078) and nine potter's marks were recovered from trenches Ch. III, VI and VIII, of which three potters' marks were from in-situ contexts belonging to site Period II (Sfs 499, 532 & 533) (Plates 8.11, 8.12 & 8.13). Sfs 499 and 532 were found on sherds of Burnished Red Ware in wall melt 71, which has a date of between c. 1260–900 BC, and Burnished Red Ware sherd Sf 533 from the fill of pit/ditch 61, which has a date of between c. 1270–930 BC. A vessel with incised fish was dated by Wheeler to the around the third to second centuries BC (Wheeler 1962: 63), but the presence of early potter's marks correlates well with an example from Loebanr 3 (Swat Valley Period IV) published by Stacul (1987: Figure 33b). Wheeler also published five 'uninformative' inscriptions written on sherds (Wheeler 1962: 126–127), and the only inscription from the recent examples (Sf 1078) was unfortunately recovered from mixed contexts (Colour Plate 1.2) (Plate 8.12). Dr Nasim Khan of the Department of Archaeology, University of Peshawar, has kindly provided the following comment on the Kharoshthi inscription:

> 'The inscription reads davena 'by Dava' or vhavena 'by Vhava', a proper name in instrumental case. The reading of the first letter is doubtful. It is either a mistake for the letter da with a hook on its right in place of left side or it is an incomplete vha, the upper horizontal bar of which is missing here. In both cases, we have no obvious etymology. There is a swastika sign at the end of the inscription, but I am not sure whether it is an aksara because we have no such sign in Kharoshthi. Some part of this sign is missing at the edge of the fragmentary sherd. As far as the date is concerned, there is no truly characteristic aksara which would enable us to date this inscription.'

Special Finds no. 105 Trench: Ch. VI Context: 7
Period: VI Weight: 16g
Form and ware: Coarse ware Dimensions: body sherd
Description: Potter's mark.

Special Finds no. 1171 Trench: Ch. VIII Context: 1012
Period: V Weight: 21.8g
Form and ware: Coarse ware Dimensions: 2.0 x 4.3 x 3.8cm
Description: Potter's mark

Special Finds no. 283 Trench: Ch. VI Context: 45
Period: V Weight: 15.8g
Form and ware: Rippled Rim Dimensions: 2.0 x 4.3 x 3.8cm
Description: Potter's mark.

Special Finds no. 499 Trench: Ch. VI Context: 71
Period: II Weight: 20.8g
Form and ware: Burnished Red Ware Dimensions: 2.0 x 4.3 x 3.8cm
Description: Potter's mark.

Special Finds no. 1078 Trench: Ch. VIII Context: 1035
Period: VI Weight: 16.0g
Form and ware: Coarse ware Dimensions: 2.0 x 4.3 x 3.8cm
Description: Inscription.

Special Finds no. 516 Trench: Ch. III Context: 11
Period: V Weight: 25.0g
Form and ware: Burnished Red Ware Dimensions: 2.0 x 4.3 x 3.8cm
Description: Potter's mark

Special Finds no. 123 Trench: Ch. VI Context: 35
Period: V Weight: 15.8g
Material: Rippled rim Dimensions: 2.0 x 4.3 x 3.8cm
Description: Potter's mark

Special Finds no. 163 Trench: Ch. VI Context: 40
Period: V Weight: 21.8g
Form and ware: Rippled rim Dimensions: 2.0 x 4.3 x 3.8cm
Description: Potter's mark

Special Finds no. 532 Trench: Ch. VI Context: 71
Period: II Weight: 93.8g
Form and ware: Rippled rim Dimensions: 12.0 x 7.5 x 6.6cm
Description: Potter's mark

Special Finds no. 533 Trench: Ch. VI Context: 60
Period: II Weight: 47.1g
Form and ware: Burnished Red Ware Dimensions: 8.3 x 5.6 x 8.9cm
Description: Potter's mark

8.5 DECORATED BODY SHERDS

A total of 60 decorated sherds (2088.9g) were recovered from in-situ levels within trenches Ch. III, VI and VIII. These sherds have been subdivided into six groups: black painted, geometric stamp, horseshoe stamp, incised line, appliqué rope and triangular stamp, including two lotus or 'Pushkalavati' stamps (see Section 8.2.2.5) (Plates 8.14, 8.15, 8.16 & 8.17). Black paint on red coarse ware proved to be the most abundant in number with 27 sherds followed by 15 incised lines, 8 geometric stamps, 4 appliqué ropes, 3 triangular stamps and 1 horseshoe stamp. Wheeler's sequence suggested a relatively early use of incised decoration but late appearance of black-on-red painted pottery, late 4th to 3rd century BC (Wheeler 1962: 54), and stamped decoration, 2nd century BC (Wheeler 1962: 70). Most of the decorated sherds from the recent excavations at the Bala Hisar were recovered from Period II, with only 776g from Period III. Whilst there is no great surprise at the presence of incised decoration in Period II, the additional presence of 158g of painted sherds and 575g of stamped sherds in the same period is at odds with Wheeler's sequence. Furthermore, their presence in two quite separate trenches, Ch. VI and VIII, suggests that they are not merely out of context material moved by bioturbation. Indeed, context 1077, which has yielded an example of both decorations, is a Period II sealed old land surface with a radiocarbon measurement of c. 1310–1060 BC. Black-on-red decoration is well known from the Swat Valley during Valley Period IV, but after that period Stacul has argued that 'painted pottery completely disappears from the valley' (Stacul 1987: 103). Geometric decorations on bone and faience are also known within Swat Valley Period IV (Stacul 1987: 100), whilst stamps were used to decorate terracotta objects (Stacul 1987: 110). Certainly, black-on-red painted examples were also recovered from Period III of the Gandharan Grave cemetery of Timargarha in the Dir Valley (Dani 1967: 168). Finally, note should also be made of the black-on-red painted sherds from the vicinity of Akra Dheri, which has been ascribed dates of c. 900–800 BC (Khan et al 2000: 90), the purple-brown on red from Period I (1200–600 BC) at Kandahar (McNicoll & Ball 1996: 22) and the black on red from the lower levels of the Bhir Mound (Marshall 1951: 431). In conclusion, Charsadda Period II may be included within the terminal section of Swat Valley Period IV (c. 1730–1300 BC) and certain elements of its traditions, such as the black-on-red painted pottery, may have survive longer in the Peshawar plain than in the Swat Valley. A further 14 examples of decorated sherds were recovered from the disturbed contexts of Periods V and VI.

Trench	Context	Period	Sf no.	Weight (g)	Decoration
VI	57	II		10	Black paint on red
VI	71	II		10	Black paint on red
VI	71	II		20	Black paint on red
VI	71	II		10	Black paint on red
VI	71	II		10	Black paint on red
VI	71	II		20	Black paint on red
VI	71	II		10	Black paint on red
VIII	1034	II		8	Black paint on red
VIII	1077	II		60	Black paint on red
III	16	III		10	Black paint on red
VI	66	III		10	Black paint on red
VI	66	III		10	Black paint on red
VI	66	III		20	Black paint on red
VI	66	III		15	Black paint on red
VI	66	III		10	Black paint on red
VI	66	III		10	Black paint on red
VI	66	III		10	Black paint on red
VI	67	III		10	Black paint on red
VI	72	III		10	Black paint on red
VI	72	III		10	Black paint on red
VI	72	III		10	Black paint on red
VI	72	III		20	Black paint on red
VI	72	III		10	Black paint on red
VI	73	III		20	Black paint on red
VI	73	III		10	Black paint on red
VI	73	III		20	Black paint on red
III	95	III		25	Black paint on red
VIII	1031	II.D		20	Geometric stamp
VIII	1034	II.D		100	Geometric stamp
VIII	1034	II.D		60	Geometric stamp
VIII	1034	II.D		20	Geometric stamp
VIII	1040	II.D		40	Geometric stamp
VIII	1064	II.B		140	Geometric stamp
VIII	1064	II.B		60	Geometric stamp
VIII	1077	II.B		65	Geometric stamp
III	15	III	521	10	Horseshoe stamp
VI	57	II		25	Incised line
VI	71	II		25	Incised line
VI	71	II		10	Incised line
VI	71	II		25	Incised line
VI	71	II		10	Incised line
VI	71	II		10	Incised line
VIII	1064	II		140	Incised line
VI	66	III		23	Incised line
VI	66	III		20	Incised line
VI	66	III		20	Incised line
VI	66	III		40	Incised line
VI	66	III		10	Incised line
VI	66	III		20	Incised line
VI	72	III		10	Incised line
VI	73	III		115	Incised line
VI	56	II		40	Rope
VI	66	III	978	80	Rope
VI	66	III	979	50	Rope
VI	66	III		110	Rope
VI	71	II		10	Triangular stamp
III	21	III		8	Triangular stamp
VI	77	III		20	Triangular stamp
III	1	VI	45	3.5	Rosette stamp
Surface	Surface	VI	527	13.9	Floral stamp
VI	7	VI	180	7.2	Geometric stamp
III	1	VI	542	7.3	Moulded line and dot
VI	1	VI	236	3.3	Rosette stamp
VI	7	VI	196	5.1	Moulded geometric

VI	7	VI	552	2.5	Unknown stamp
III	1	VI	246	4.7	Lotus stamp
III	1	VI	222	12.4	Lotus stamp
VI	37	V	207	10.9	Unknown stamp
Surface	Surface	VI	492	145	Incised Acanthus
VI	58	V	334	24.9	Incised geometric
VIII	1018	V	853	32.3	Incised geometric
III	1	VI	1063	38.1	Incised geometric
VI	40	V	145	36.1	Moulded floral
VI	35	V	172	15.7	Moulded floral

8.6 UNDECORATED BODY SHERDS

A total of 64,618 undecorated body sherds (1731kg) were also recovered from the excavations at the Bala Hisar of Charsadda (Table 8.3).

8.7 BRICKS

A total of 806kg of bricks were recovered from the Bala Hisar, with the vast majority (761kg) from mixed levels V and VI, presumably collapse from the robbed-out structures recorded by Garrick in 1882 (see Section 3.3).

8.8 CONCLUSION

As already noted in Chapters 1 and 7, Vogelsang identified a clear sequence of ceramic traditions or flavours in the material excavated by Sir Mortimer Wheeler in 1958 (Vogelsang 1988; 1992). This sequence comprised an initial local ceramic tradition linked to the Gandharan Grave Culture of the northern valleys through vessels of Red Burnished Ware and examples of Rippled Rim. This was succeeded by a distinctly 'Indic' flavour of carinated bowls and flat tray or thali forms, which was in turn succeeded by a 'western' (Aegaeic) flavour (Vogelsang 1992: 246). This sequence is very clearly attested within the sections above, with site Period II, complete with vessels of Red Burnished Ware and Rippled Rim, augmented by carinated vessels and flat trays of the 'Indic' tradition before the arrival of more exotic materials. The assemblage belonging to our 'local' northern valley tradition may be further expanded by including the newly reported sherds of Black/Grey Burnished Ware. These sherds, complete with grooved carinations, have clear analogies with examples excavated from Gandharan Grave Culture cemeteries at Timargarha, Thana (Dani 1967) and Zarif Karuna (Khan 1973). However, the most striking analogy was between anthropomorphic figure Sf 993, carved out of this distinct ware, and No. 28 from Dani's excavations at Balamabat. Our early radiocarbon dates for these three ceramic impulses is not only supported by the presence of these early forms in our in-situ contexts, but also by the notable absences of later forms which were only recovered from the disturbed or mixed contexts of site Periods V and VI, such as the category of votive tanks, well-know from the sequence of the Bhir Mound and Sirkap or sherds of NBP. Included within the assemblage of later examples from the Bala Hisar of Charsadda, are glazed ceramics which will be discussed in Chapter 13.3.

	PERIODS	I	II	III	IV	VI	Totals
RBW	no.	3	132	9		244	388
	wt. (g)	*80*	*6660*	*295*		*8780*	*15815*
BGBW	no.		2			3	5
	wt. (g)		*12.4*			*23.9*	*40.3*
NBP	no.					1	1
	wt. (g)					*4.6*	*4.6*
Fine Black Ware	no.					1	1
	wt. (g)					*10*	*10*
Fine Red Ware	no.					1	1
	wt. (g)					*1.7*	*1.7*
Diagnostic coarse ware	no.	5	404	590		4227	5226
	wt. (g)	*460*	*29447.3*	*11528.1*		*207905*	*249340.4*
Undiagnostic coarse ware	no.	19	6424	2137		*56038*	64618
	wt. (g)	*600*	*159810*	*33224*		*1538358*	*1731992*
Bricks	no.	n/a	n/a	n/a		n/a	n/a
	wt. (g)	*0*	*29760*	*14855*		*761974*	*806589*
Totals	no.	27	6962	2736		60515	70240
	wt. (g)	*1140*	*225689.7*	*59902.1*		*2517057*	*2803788.8*

Table 8.1: Ceramic objects

	PERIODS	I	II	III	IV	V/VI	Totals
RBW straight beaker	no.	3	10			84	97
	wt. (g)	80	355			2255	2690
RBW globular beaker	no.		4	1			5
	wt. (g)		160	20			180
RBW hour-glass beaker	no.					1	1
	wt. (g)					80	80
Beaker base	no.		4			7	11
	wt. (g)		400			530	930
RBW Cup	no.		3	1			4
	wt. (g)		155	15			170
RBW Pedestals	no.		8	1			9
	wt. (g)		1530	60			1590
RBW Dish on stand or pedestal	no.		2	1		3	6
	wt. (g)		280	60		105	445
RBW Dish	no.		2	7			9
	wt. (g)		180	710			890
RBW Bowl	no.		2			22	24
	wt. (g)		200			1910	2110
RBW Wheel	no.					1	1
	wt. (g)					50	50
RBW Body sherds	no.		98	5		68	171
	wt. (g)		3310	140		2342	5792
BGBW Figure	no.		1				1
	wt. (g)		4				4
BGBW sherd	no.		1			3	4
	wt. (g)		12.4			23.9	36.3
NBP	no.					1	1
	wt. (g)					4.6	4.6
Fine Black Slipped	no.					1	1
	wt. (g)					10	10
Fine Red Slipped Lotus bowl	no.					1	1
	wt. (g)					1.7	1.7
Totals	no.	3	135	16		192	346
	wt. (g)	80	6586.4	1005		7312.2	14983.6

Table 8.2: Fine wares

	PERIODS I		II	III	IV	V/VI	Totals
Rippled Rim	no.	1	30	4		78	113
A1	wt. (g)	*10*	*1680*	*140*		*4780*	*6610*
Rippled Rim	no.		6	2		15	23
A2	wt. (g)		*489*	*90*		*946*	*1525*
Tulip bowl	no.		3	1		82	86
C1–C3	wt. (g)		*55*	*20*		*2080*	*2155*
Jar	no.		6	18		168	192
D1–D4	wt. (g)		*293*	*445*		*4915*	*5653*
Jar	no.		60	72		1142	1274
E1–E8	wt. (g)		*5090*	*5885*		*36714*	*47689*
Jar	no.					54	54
F1–F3	wt. (g)					*2185*	*2185*
Bowl/lamp	no.		2	3		3	8
G2	wt. (g)		*30*	*40*		*50*	*120*
Bowl	no.	1	46	23		113	182
G1 & G4	wt. (g)	*10*	*3590*	*590*		*4318*	*8498*
Bowl	no.		23	9		88	120
G3 & G3a	wt. (g)		*485*	*110*		*2184*	*2779*
Indic bowl	no.		4	4		68	68
G5 & G8	wt. (g)		*65*	*165*		*2033*	*2033*
Bowl	no.		1	1		3	5
G6	wt. (g)		*120*	*100*		*100*	*320*
Trough	no.	1				15	16
L6	wt. (g)	*240*				*3482*	*3482*
Indic dish	no.		9	1		232	242
L10	wt. (g)		*408*	*30*		*11192*	*11630*
Grooved jar	no.		6	2		247	247
O1–O2	wt. (g)		*745*	*400*		*23827*	*23827*
Jar	no.			2		12	14
O3	wt. (g)			*110*		*1150*	*1260*
Grooved jar	no.			2		28	28
O5	wt. (g)			*400*		*2350*	*2350*
Pot	no.		5			132	137
P1–P2	wt. (g)		*320*			*8700*	*9020*
Bowl	no.		13	2		126	141
Q1–Q2	wt. (g)		*2460*	*200*		*12073*	*14733*
Tray/dish	no.		2	3		32	37
Q4–Q5	wt. (g)		*320*	*125*		*3494*	*3939*
Jar	no.		5	1		9	15
S1	wt. (g)		*140*	*10*		*225*	*375*
Jar	no.					5	5
S2–S4	wt. (g)					*81*	*81*
Jar	no.		2			19	21
S3	wt. (g)		*170*			*1013*	*1183*
Perforated vessel	no.			1		2	3
T	wt. (g)			*28.1*		*119*	*147.1*
Dish on stand	no.					59	59
H1–H2	wt. (g)					*4750*	*4750*
Short pedestal	no.					13	13
H3–H4	wt. (g)					*2000*	*2000*

	PERIODS I		II	III	IV	V/VI	Totals
Flat base	no.		44	29		751	824
L1	wt. (g)		*1687*	*1150*		*23426*	*26263*
Low pedestal base	no.	1	8	1		34	44
L2	wt. (g)	*180*	*840*	*80*		*2948*	*4048*
Ring-footed base	no.		5	1		22	28
L3	wt. (g)		*190*	*120*		*1019*	*1329*
Disk-bottomed base	no.		51			59	110
L4	wt. (g)		*6070*			*6440*	*12510*
Round-bottom base	no.		30	9		244	283
L5	wt. (g)		*1565*	*363*		*14605*	*16533*
Undiagnostic base	no.					86	86
L7	wt. (g)					*11255*	*11255*
Lid	no.	1	2			45	48
J1	wt. (g)	*20*	*31.2*			*2210*	*2261.2*
Lid	no.					24	24
J2	wt. (g)					*1800*	*1800*
Lid	no.					12	12
J3	wt. (g)					*561*	*561*
Lid	no.		1				1
J4	wt. (g)		*210*				*210*
Lid	no.					1	1
J5	wt. (g)					*50*	*50*
Lugs	no.		8	3		56	67
K1–K3 & K6	wt. (g)		*1175*	*150*		*3290*	*4615*
Anthropomorphic	no.					4	4
Lugs	wt. (g)					*160.6*	*160.6*
Handles	no.					67	67
K4–K5	wt. (g)					*2534*	*2534*
Spout	no.		1	1		25	27
I1–I2	wt. (g)		*60*	*1*		*955*	*1016*
Spout	no.					20	20
I3	wt. (g)					610	610
Anthropomorphic	no.					1	1
spout I4	wt. (g)					40	40
Ceramic wheel	no.			2		8	10
	wt. (g)			40.2		238.2	278.2
Oil lamps	no.					4	4
	wt. (g)					212	212
Votive tank	no.					7	7
	wt. (g)					170.2	170.2
Potter's koncra	no.					2	2
	wt. (g)					115	115
Incense stick	no.					1	1
stand?	wt. (g)					20	20
Potter's mark &	no.			3		7	10
inscription	wt. (g)			160.9		129	289.9
Decorated body	no.		26	32		2	60
sherds	wt. (g)		958	776		354.9	2088.9
Undecorated body	no.	19	6424	2137		56038	64618
sherds	wt. (g)	600	159810	33224		1538358	1731992
Total	no.	24	6828	2727		60265	69844
	wt. (g)	1060	189357.3	44752.1		1746263	1981332

Table 8.3: Coarse wares

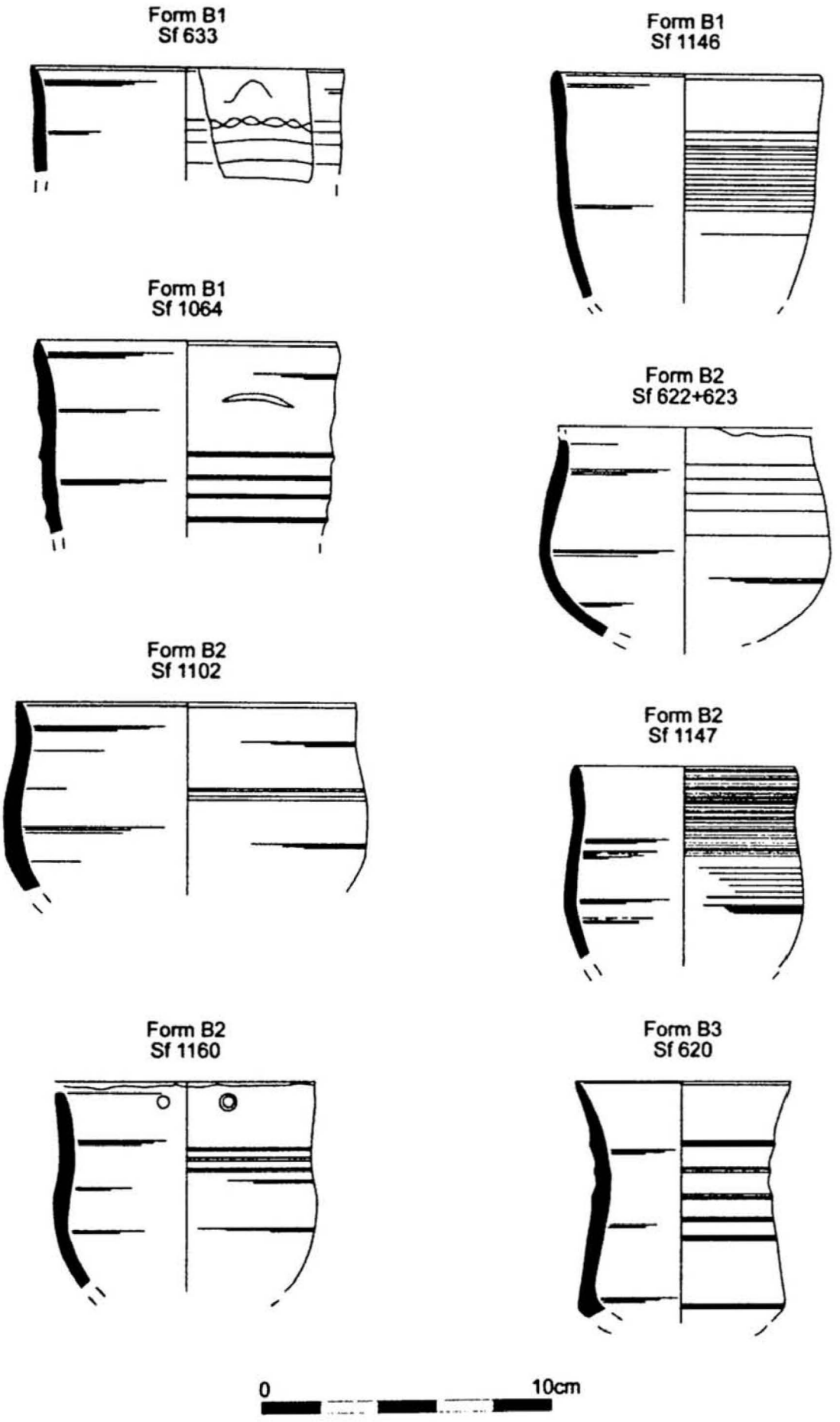


Figure 8.1: Unglazed ceramics
Burnished Red Ware: straight-sided beaker rim (Sfs 633, 1146 & 1064), globular-sided beaker rim (Sfs 622/623, 1102, 1147 & 1160), hour-glass shaped beaker rim (Sf 620)

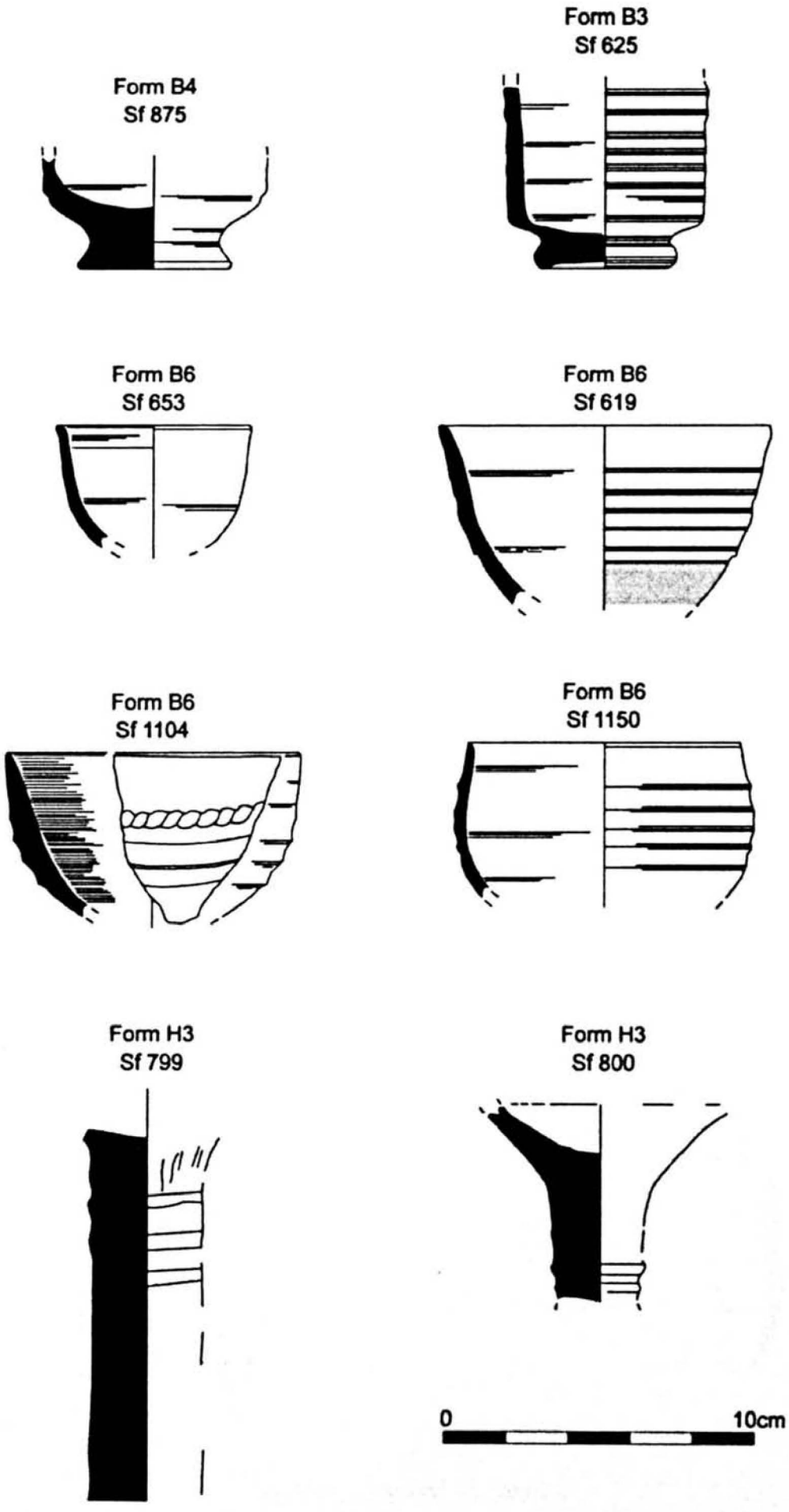


Figure 8.2: Unglazed ceramics
Burnished Red Ware: beaker base (Sf 625 & 875), cup rim (Sfs 619, 1104, 1150 & 653), pedestal (Sfs 799 & 800)

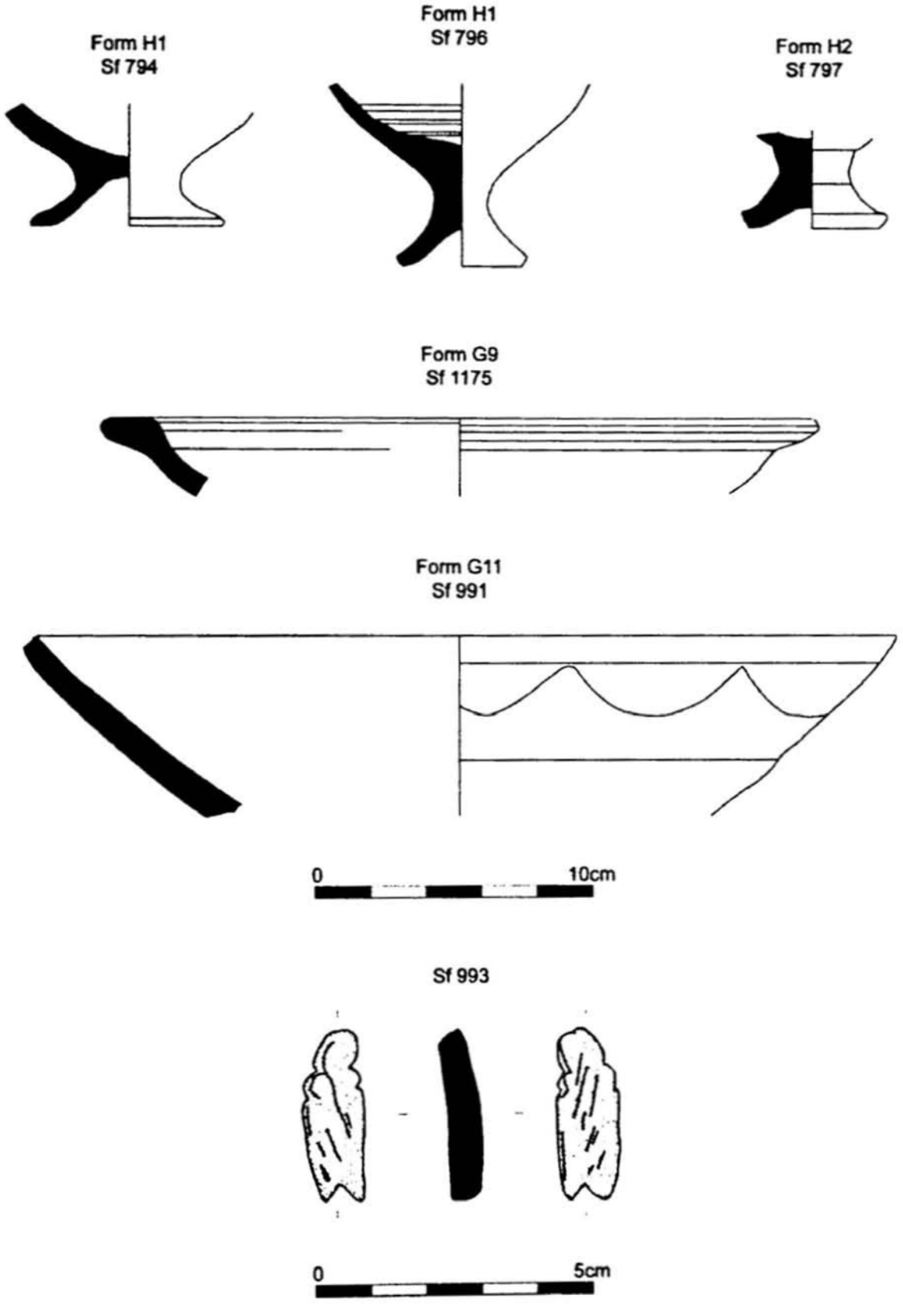


Figure 8.3: Unglazed ceramics
Burnished Red Ware dish on stand (Sfs 797, 794 & 796), dish rim (Sf 1175), 'wavy-line' dish rim (Sf 991). Black/Grey Burnished Ware anthropomorphic figure (Sf 993)

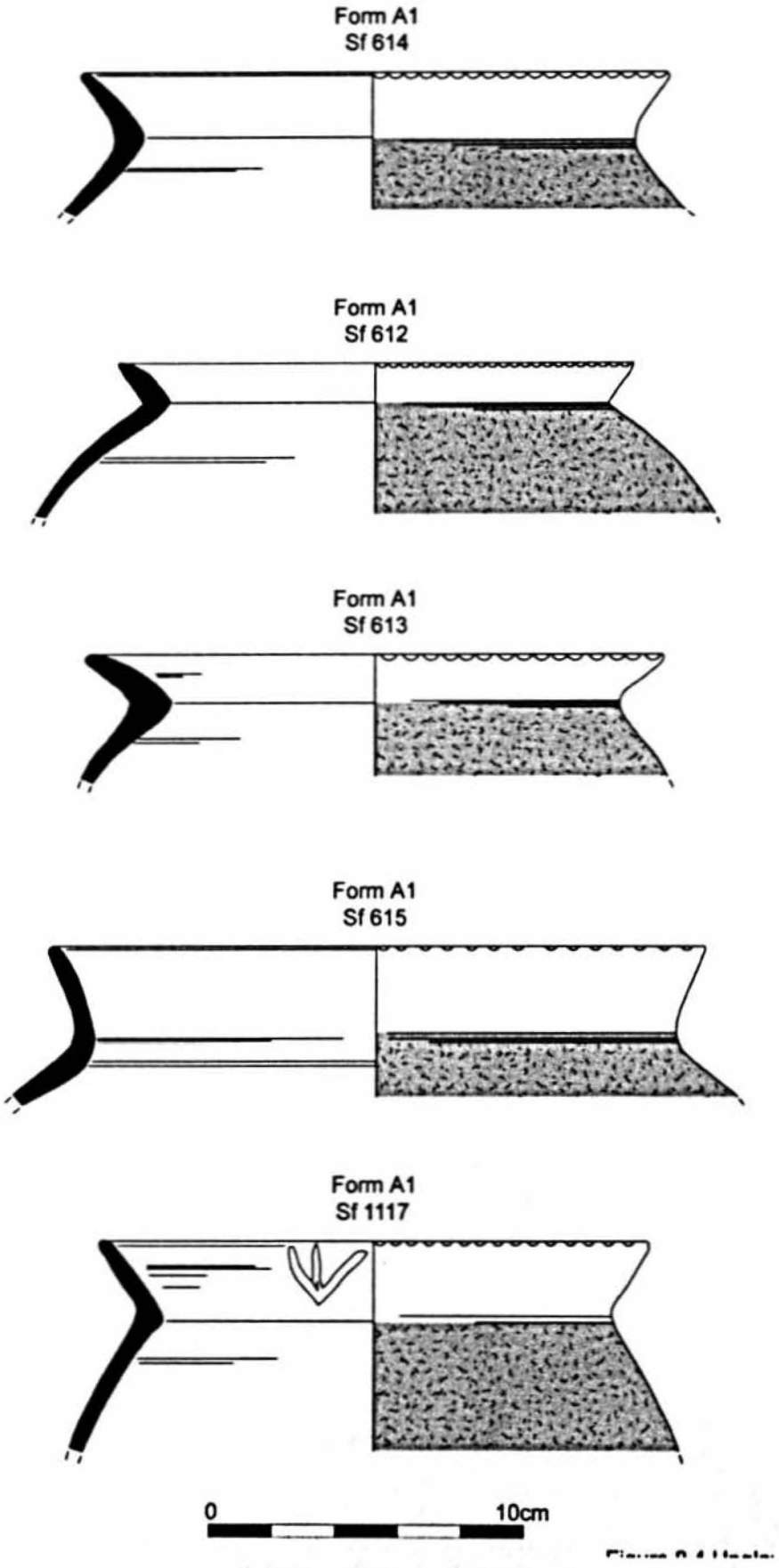


Figure 8.4: Unglazed ceramics
'Rippled rim': jar rim A1 (Sfs 614, 612, 613 & 615), jar rim A1 with potter's mark (Sf 1117)

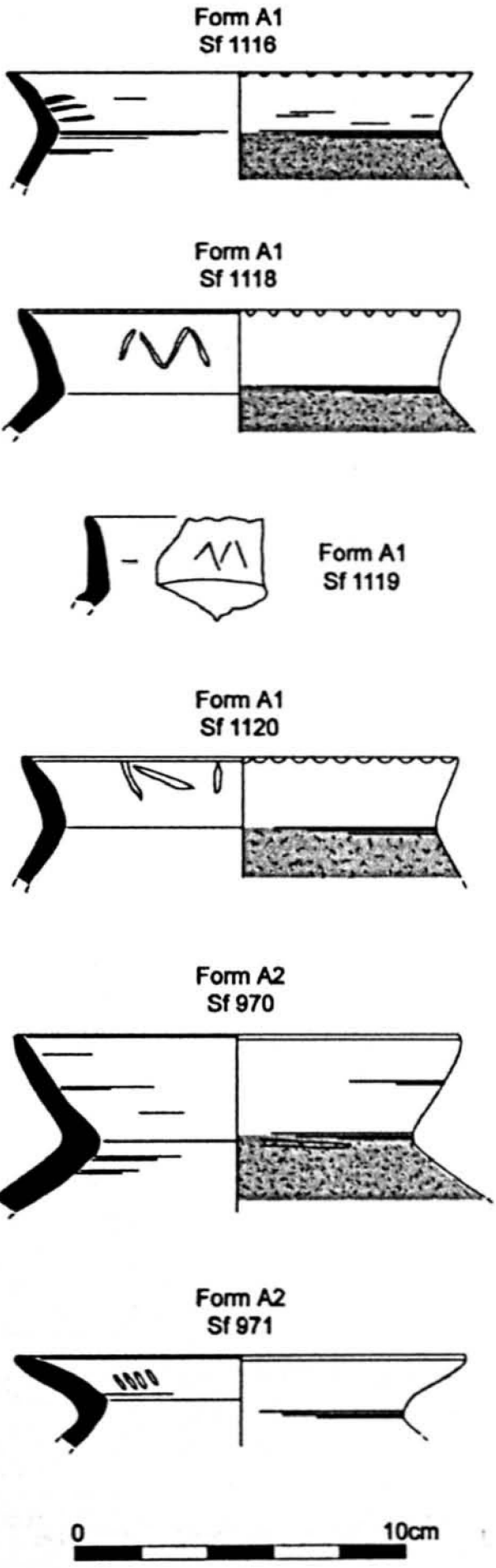


Figure 8.5: Unglazed ceramics
'Rippled rim': jar rim A1 with potter's mark (Sf s1120, 1118, 1119 & 1116); jar rim A2 (Sf 970); jar rim A2 with potter's mark (Sf 971)

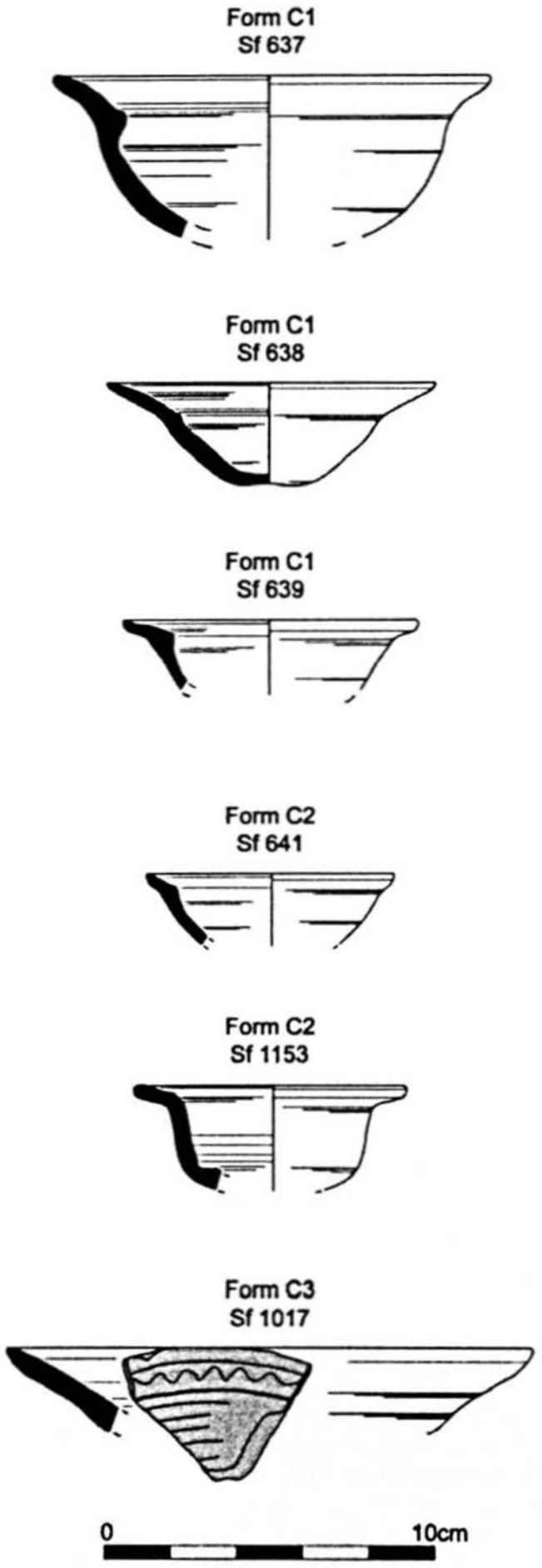


Figure 8.6: Unglazed ceramics
'Tulip bowl': rim C1 (Sfs 637, 638 & 639); rim C2 (Sfs 641 & 1153); C3 (Sf 1017)

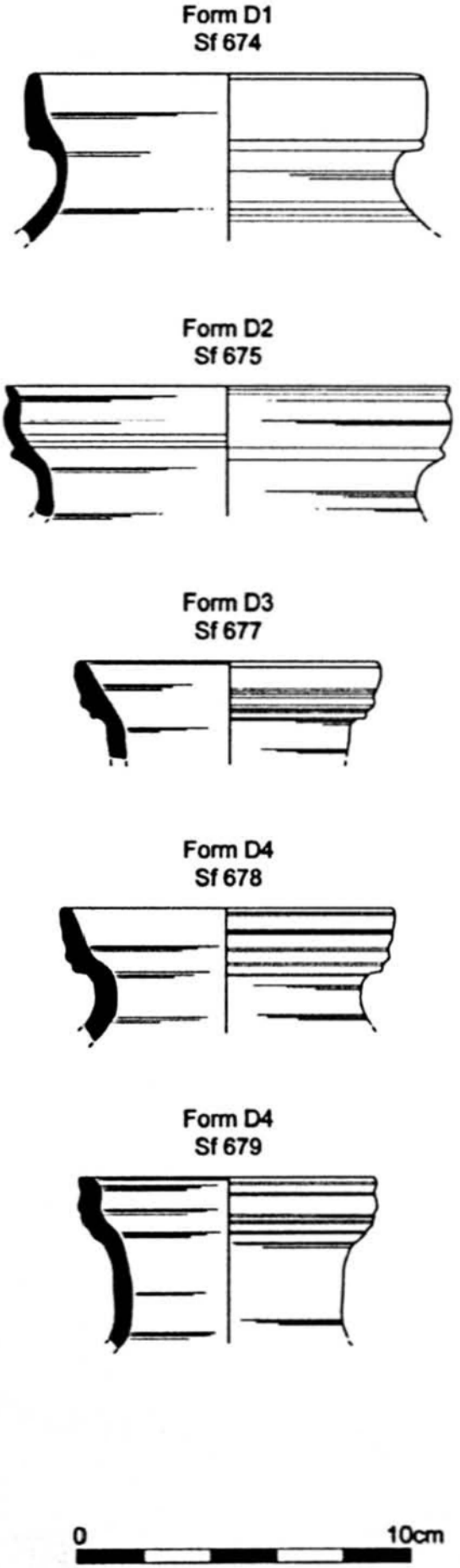


Figure 8.7: Unglazed ceramics
Large jar with collared rim: D1 (Sf 674); D2 (Sf 675); D3 (Sf 677); D4 (Sfs 678 & 679)

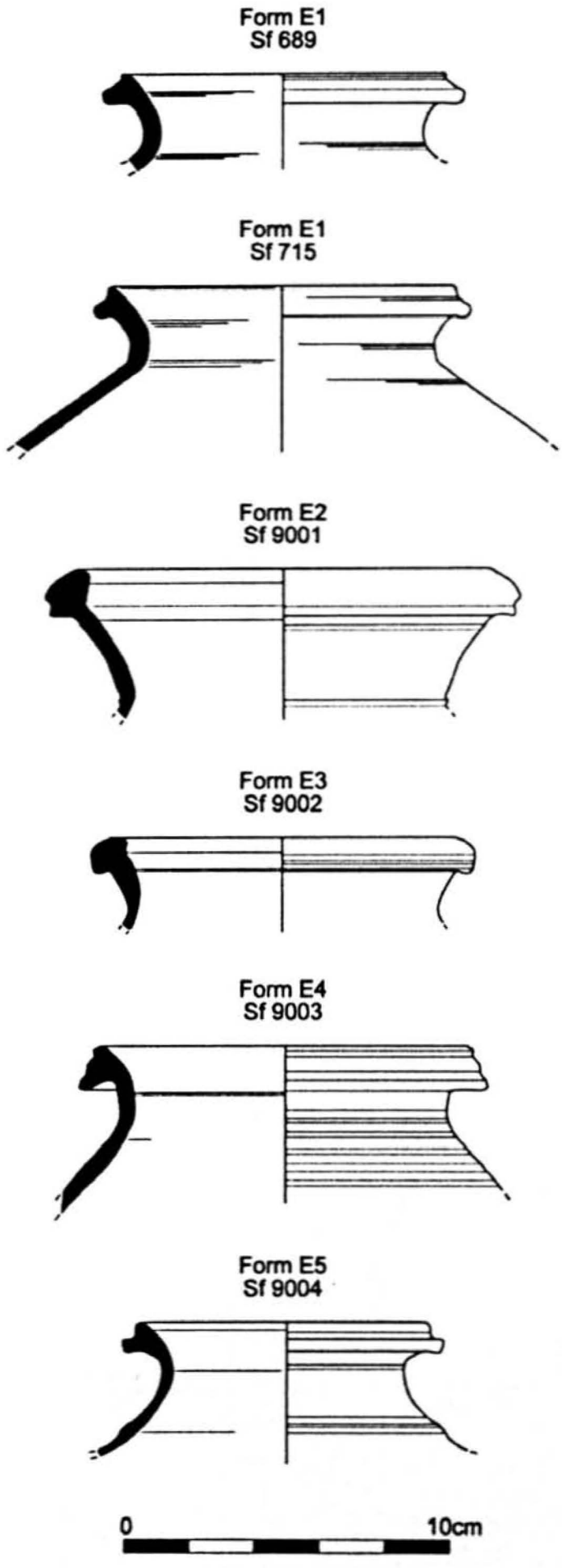


Figure 8.8: Unglazed ceramics
Jar with everted rim: E1 (Sfs 715 & 689); E2 (Sf 9001); E3 (Sf 9002); E4 (Sf 9003); E5 (Sf 9004)

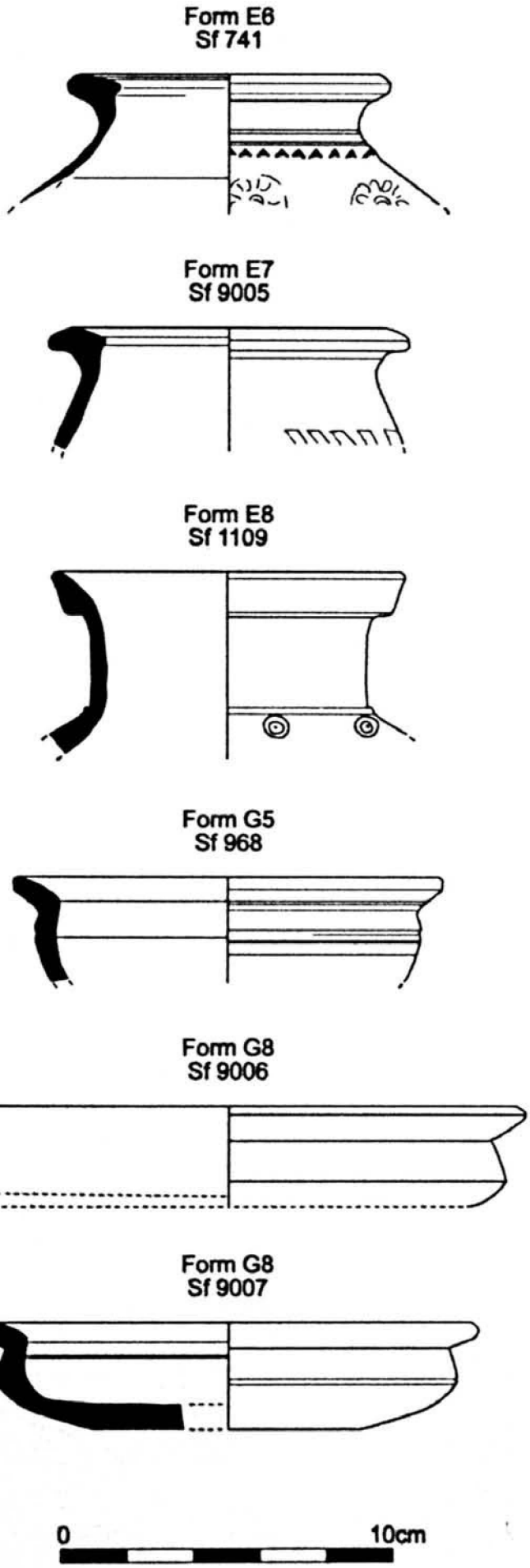


Figure 8.9: Unglazed ceramics
Jar with everted rim: E6 (Sf 741); E7 (Sf 9005); E8 (Sf 1109). Carinated 'Indic' bowl with everted rim: G5 (Sf 968); G8 (Sfs 9006 & 9007)

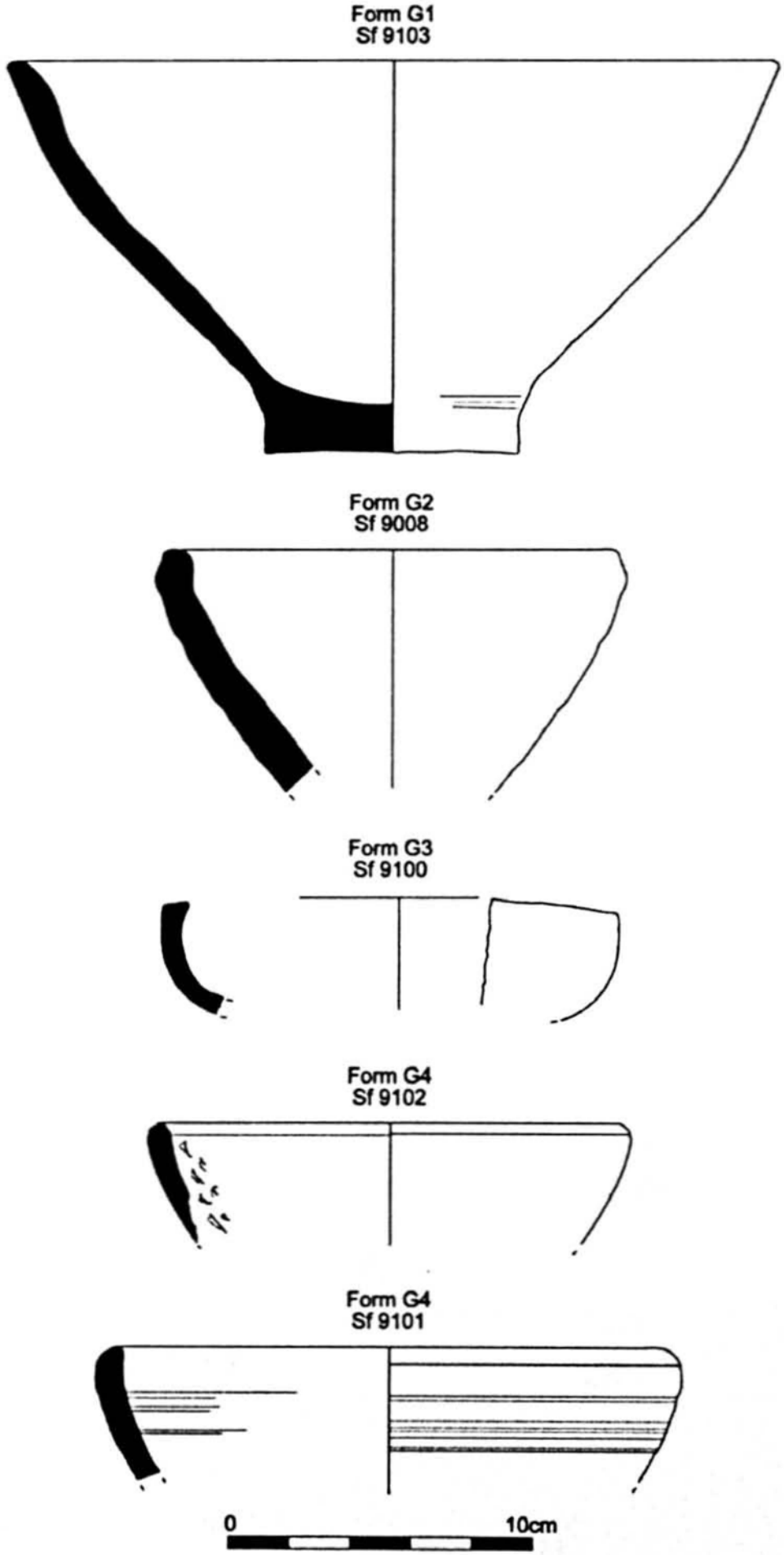


Figure 8.10: Unglazed ceramics
Bowl or lamp G2 (Sf 9008). Bowl G1 (Sf 9103). Bowl G4 (Sf 9102). Bowl G4 (Sf 9101). Bowl G3 (Sf 9100)

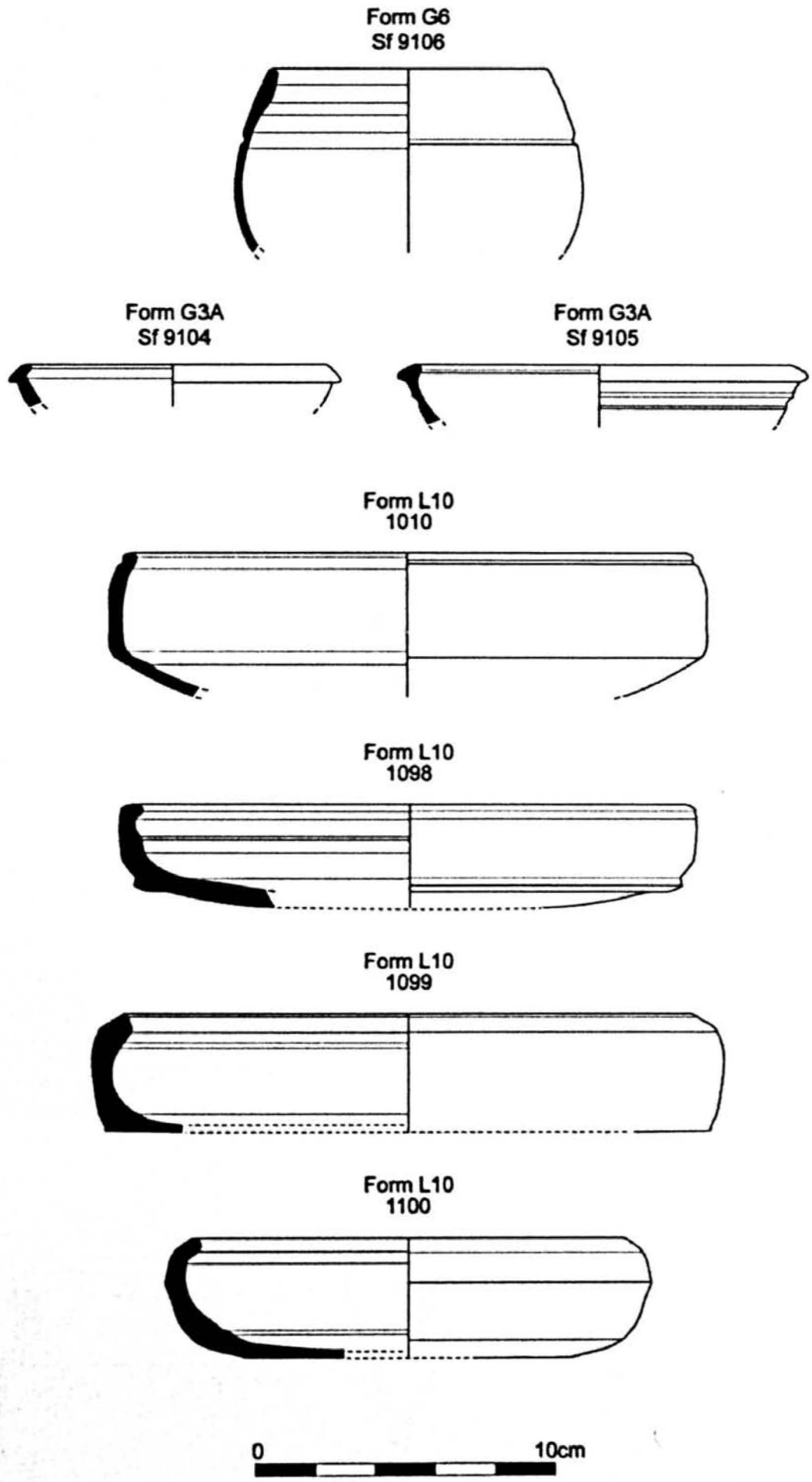


Figure 8.11: Unglazed ceramics
Bowl G3A (Sf 9104). Bowl G3A (Sf 9105). Bowl G6 (Sf 916). 'Indic' dish L10 (Sf 1010, 1098, 1099 & 1100)

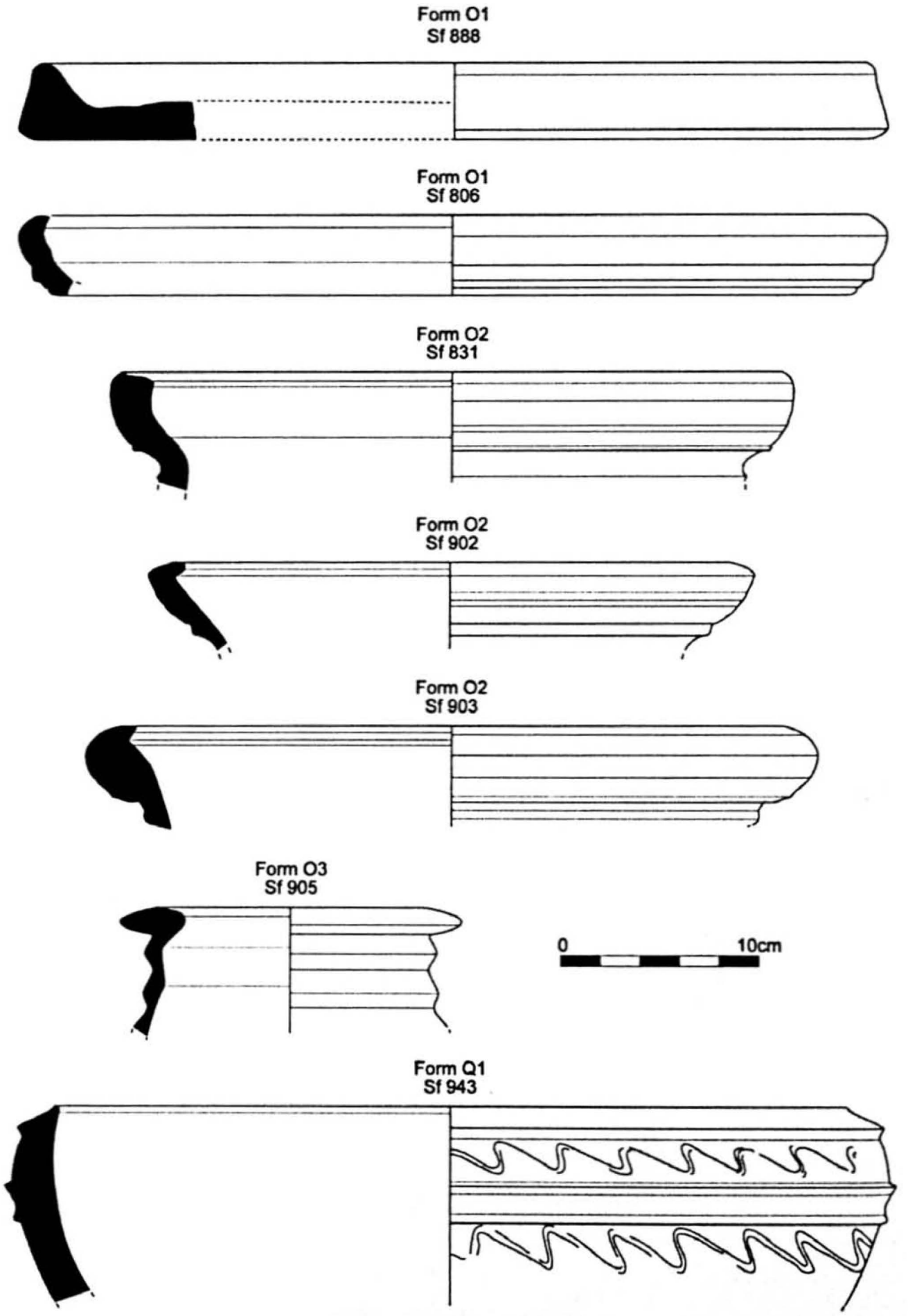


Figure 8.12: Unglazed ceramics
Trough L6 (Sf 888). Grooved jar O1 (Sfs 806 & 831). Grooved jar O2 (Sfs 902 & 903). Jar O3 (Sf 905). Bowl Q1 (Sf 943)

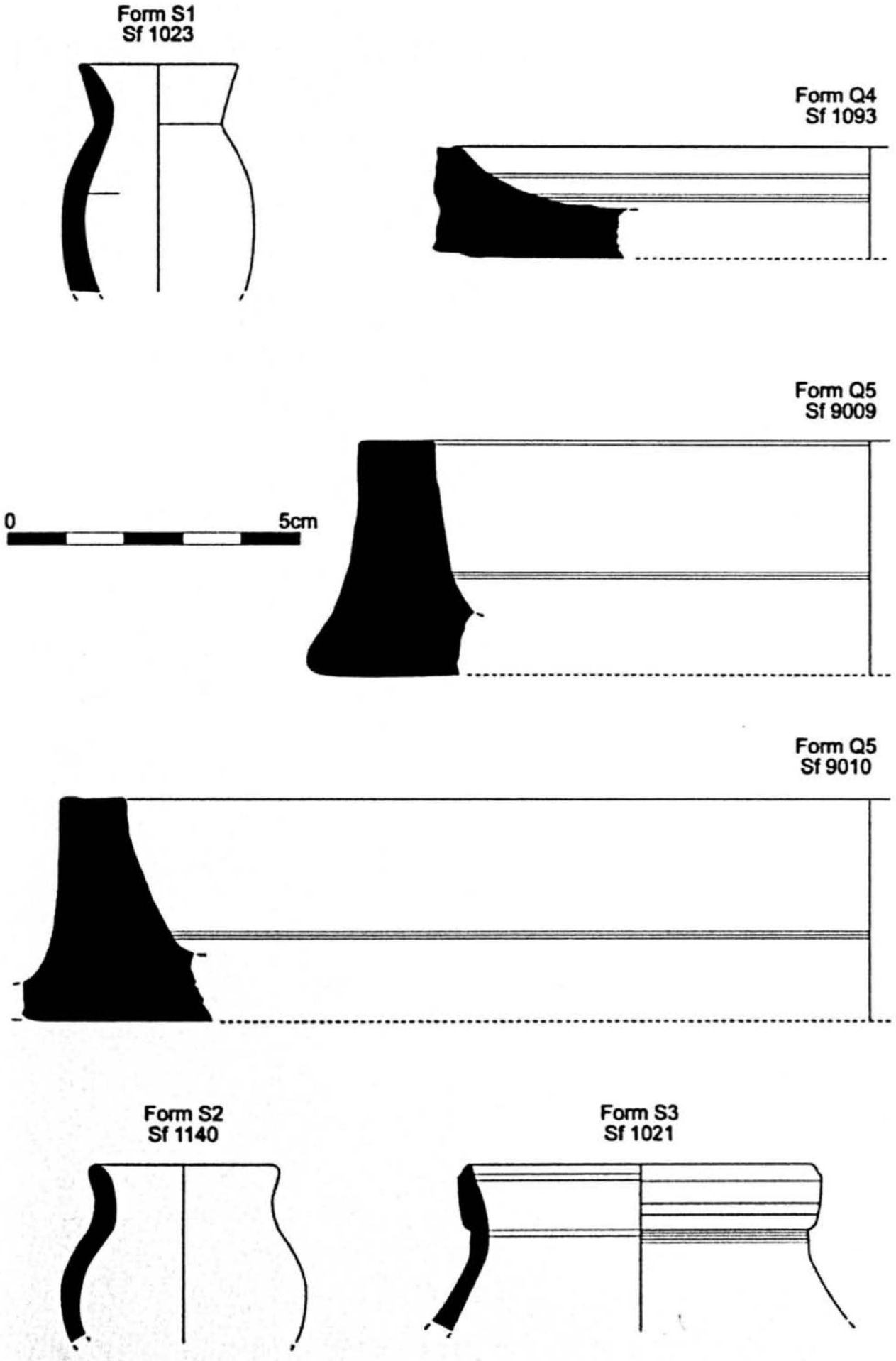


Figure 8.13: Unglazed ceramics
Tray/dish Q4 (Sf 1093). Tray/dish Q5 (Sf 9009). Tray/dish Q5 (Sf 9010). Jar S1 (Sf 1023). Jar S2 (Sf 1140). Jar S3 (Sf 1021)

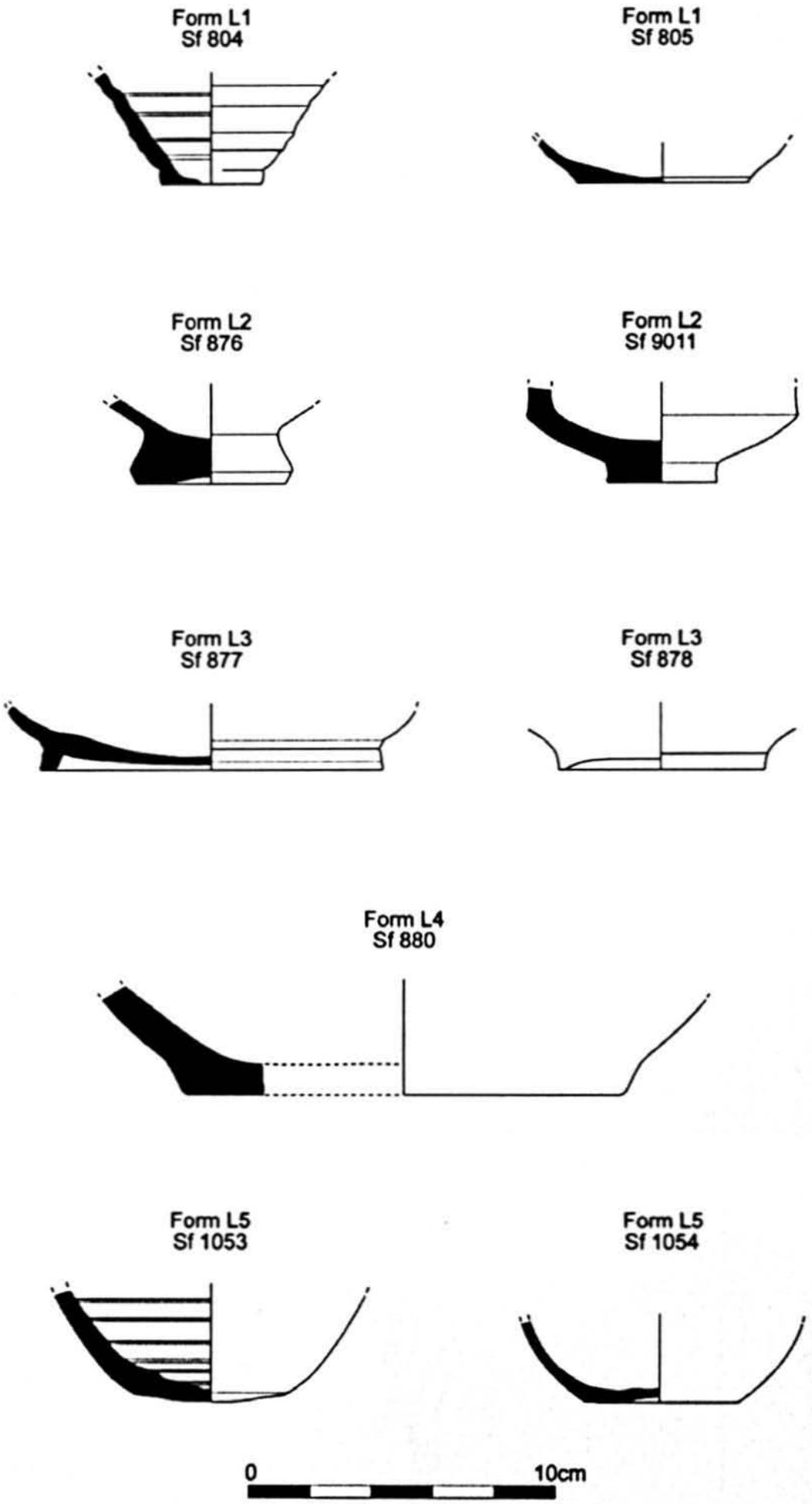
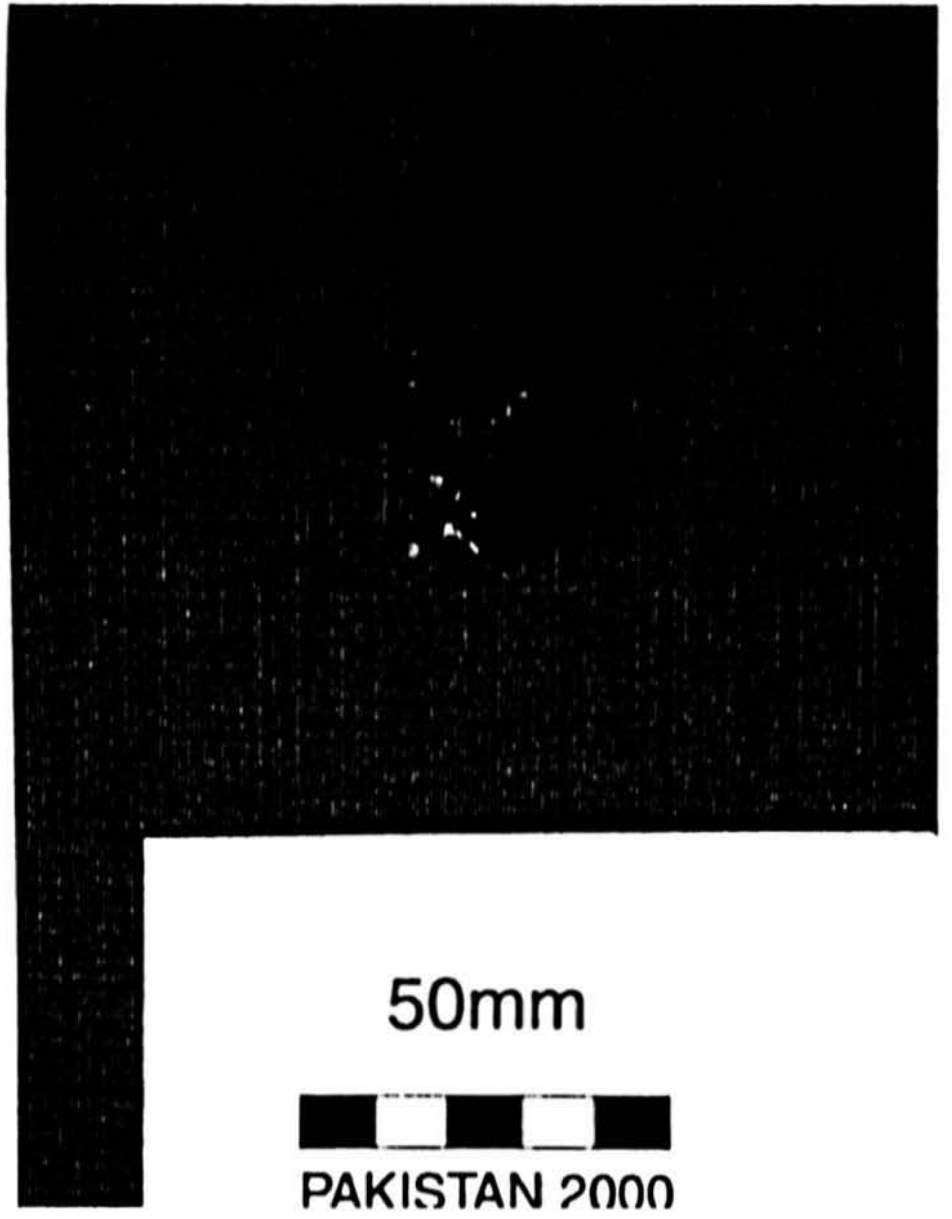


Figure 8.14: Unglazed ceramics
Flat-bottomed base L1 (Sfs 804 & 805). Low pedestal base L2 (Sfs 876 & 9011). Ring-footed base L3 (Sfs 877 & 878). Disc-bottomed base L4 (Sf 880). Round-bottomed base L5 (Sfs1053 & 1054)



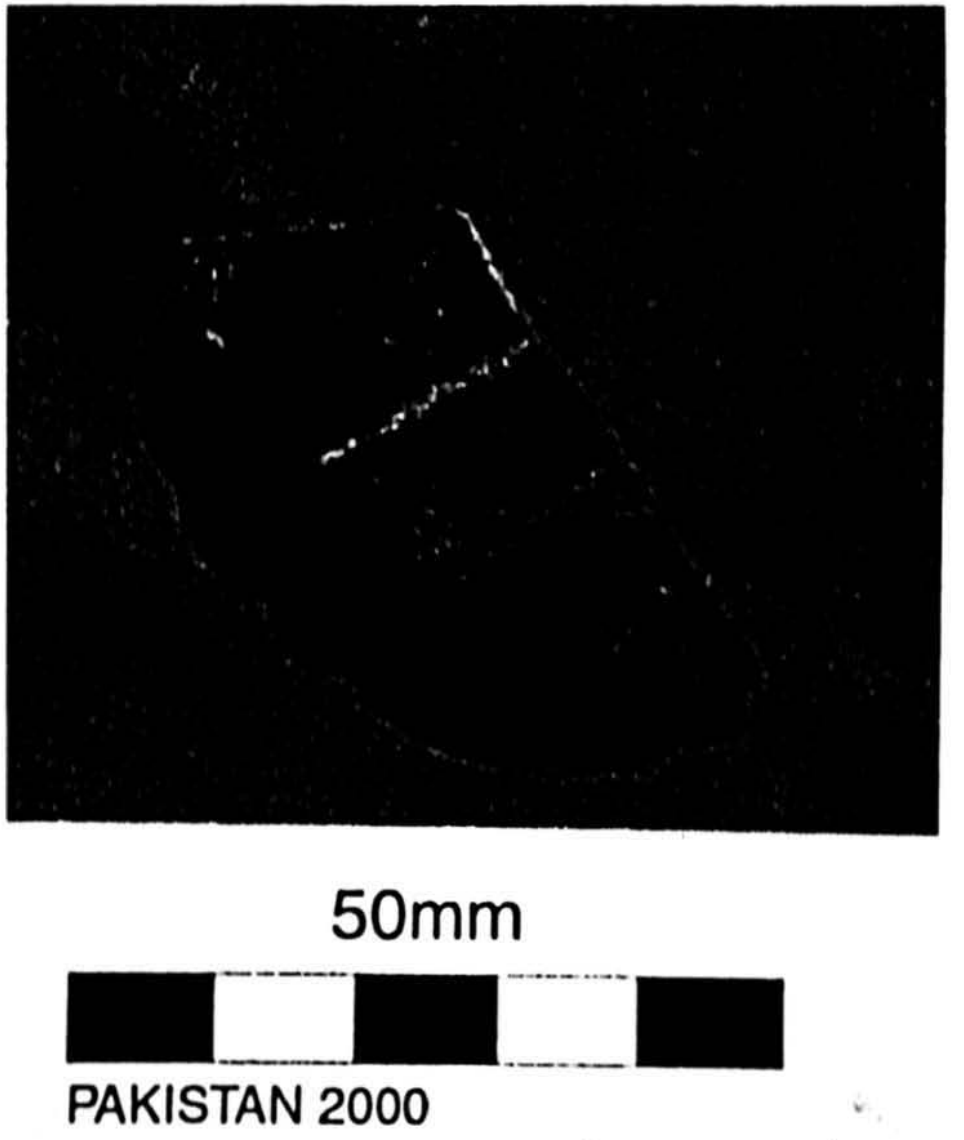


Plate 8.1: Fine wares
Black/Grey Burnished Ware: anthropomorphic figure (Sf 993) and sherd with condons (Sf 700)

Plate 8.2: Coarse wares
Jar with rippled rim A1 (Sf 612). Jar without rippled rim A2 (Sf 670). Tulip Bowl C2 (Sf 1153). Jar with collared rim D3 (Sf 677)

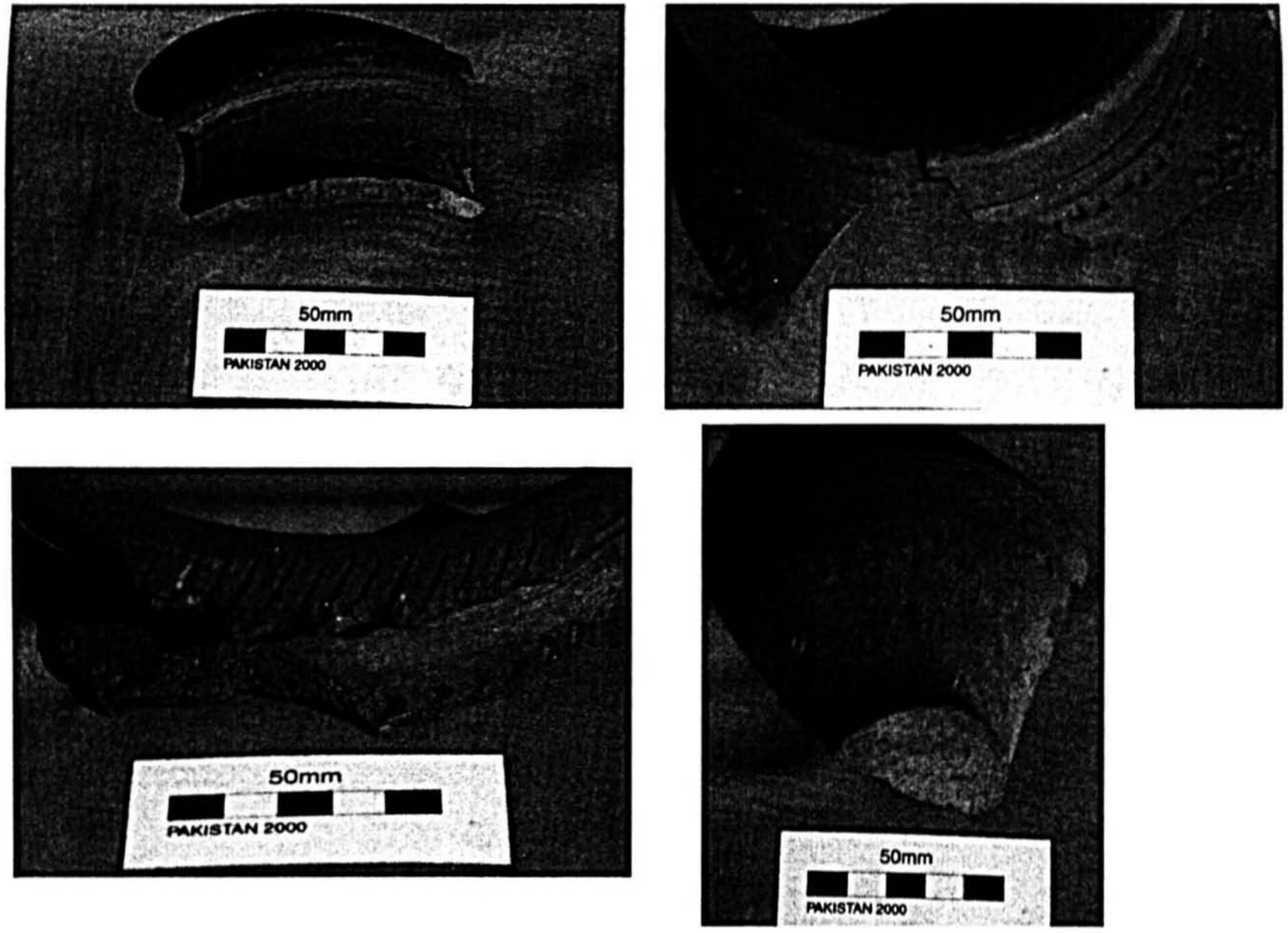


Plate 8.3: Coarse wares
Jar with everted rim E3 (Sf 708). Jar with everted rim E6 (Sf 741). Jar F1 (Sf 1079). Bowl G1 (Sf 677)

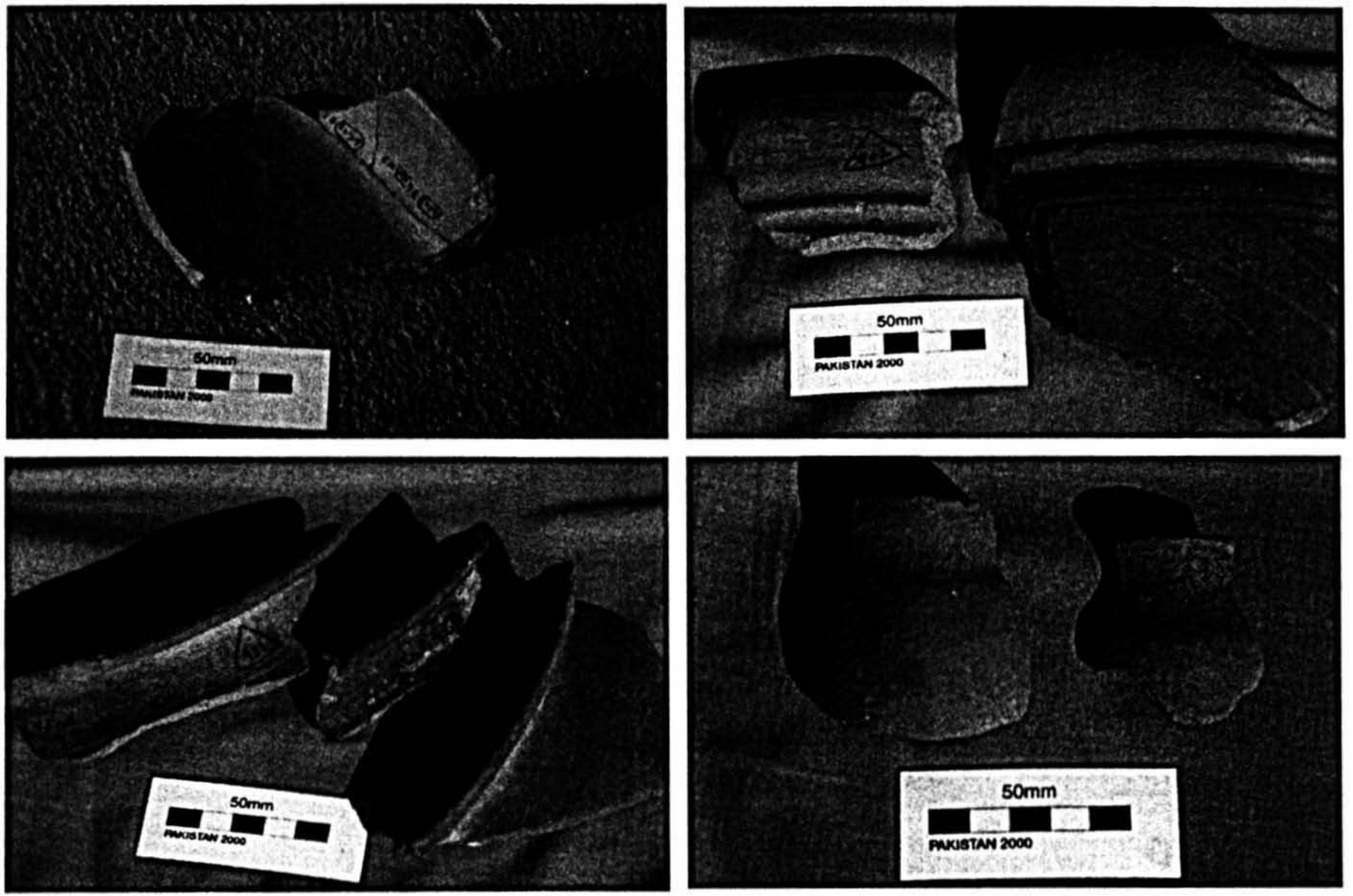


Plate 8.4: Coarse wares
'Indic' dish L10 (Sf 2020). Grooved jar O2 (Sf 902) (l.) & Grooved jar O5 (Sf 910) (r.). Pot P1 (Sf 931) (l.), Pot P2 (Sf 932) (c.) & Pot P2 (Sf 1107) (r.). Jar S1 (Sf 1005)(l.) & Mini jar S4 (Sf 1023)(r.)

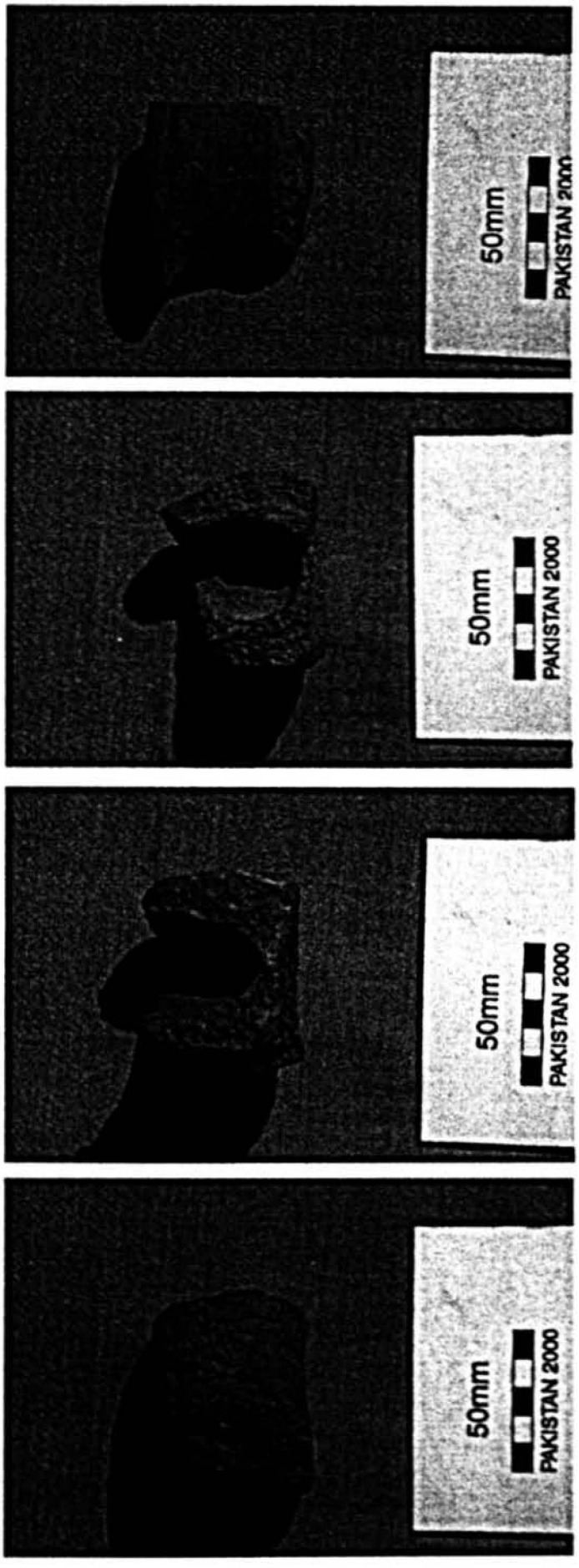


Plate 8.5: Coarse wares
Mini jar S4 (Sf 1140). Mini jar S4 (Sf 1140). Mini jar S4 (Sf 1022). Mini jar S4 (Sf 1139)

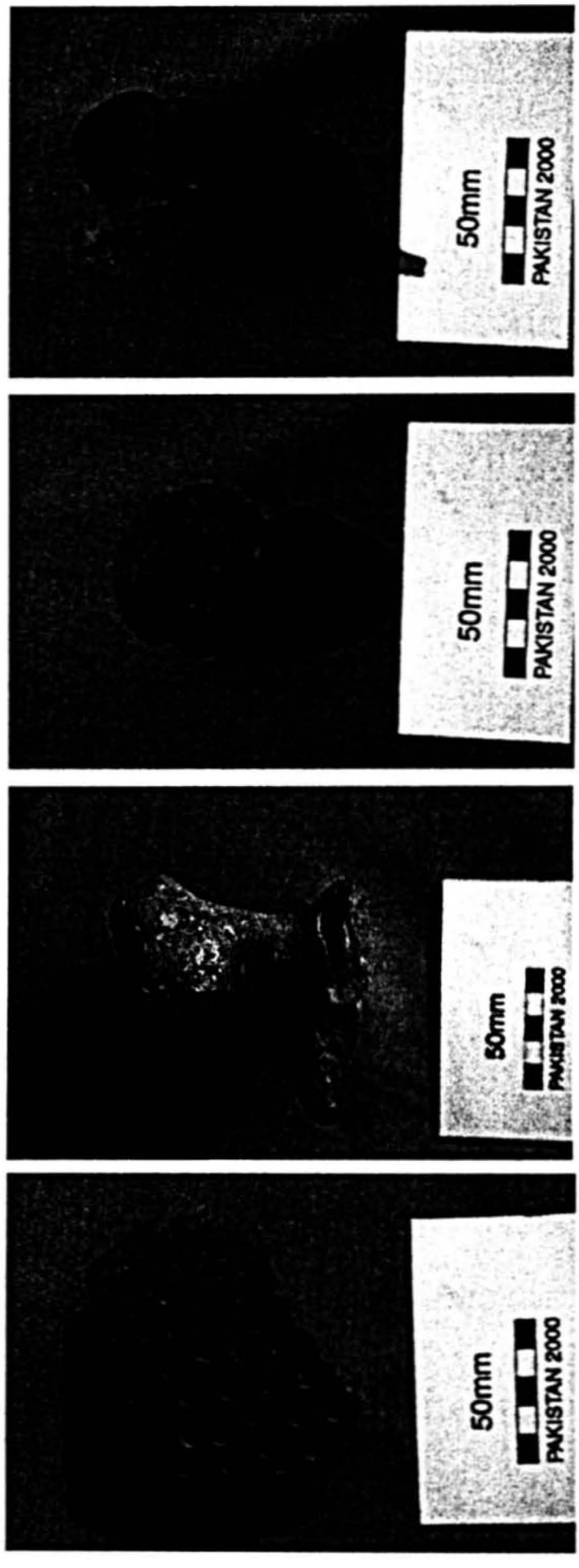


Plate 8.6: Coarse wares

Perforated vessel T (Sf 497). Anthropomorphic lug (Sf 101). Anthropomorphic lug (Sf 1106). Anthropomorphic lug (Sf 1106)

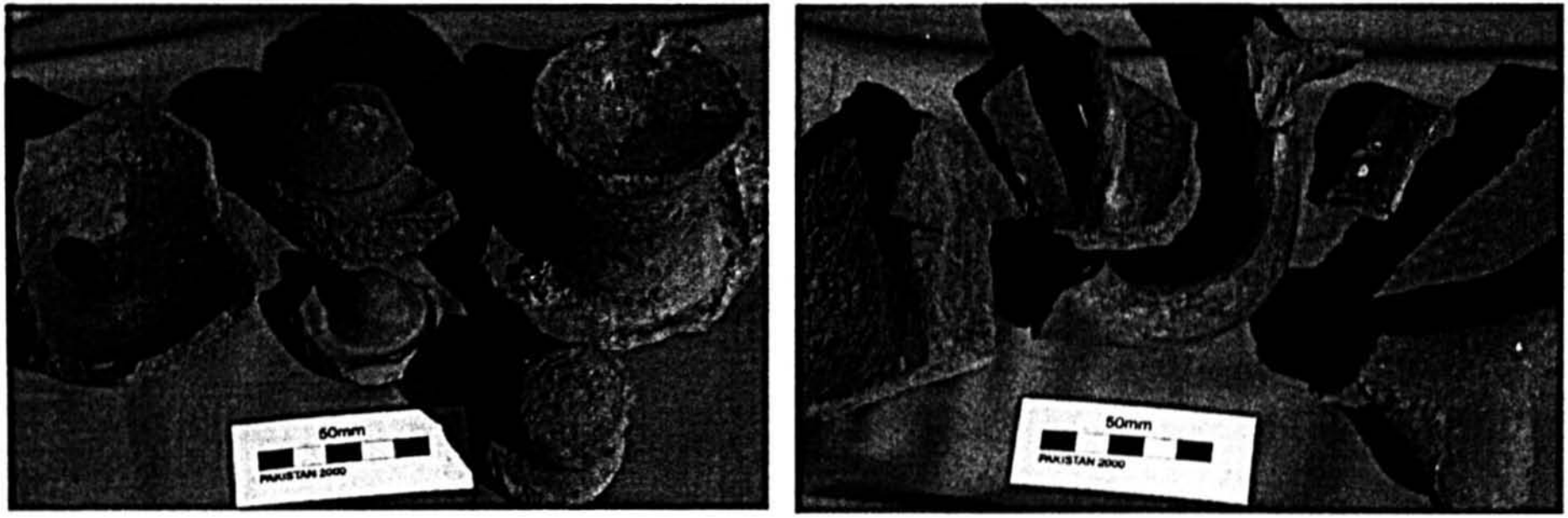


Plate 8.7: Coarse wares
Lid J1 (Sf 1035) (l.), Lid J2 (Sf 841) (ct.), Lid J3 (Sf 844) (cb.), Lid J4 (Sf 531) (rt.) & Lid J5 (Sf 480) (rb.). Lug K2 (Sf 912)(l.), Lug K3 (Sf 916) (lc.), Handle K4 (Sf 1041) (c.), Handle K5 (Sf 1043) (rc.) & Lug K6 (Sf 1092) (r.)

Plate 8.8: Coarse wares
Spout 11 (Sf 826) (l.), Spout 12 (Sf 1046) (lc.), Spout 13 (Sf 1048) (rc.) & Spout 14 (Sf 1049) (r.). Zoomorphic spout 15 (Sf 131)
Zoomorphic spout 15 (Sf 131)

Plate 8.9: Coarse wares
Zoomorphic vessel (Sf 496). Oil lamp (Sf 859). Votive tank frog (Sf 274). Votive tank lamp (Sf 1138)

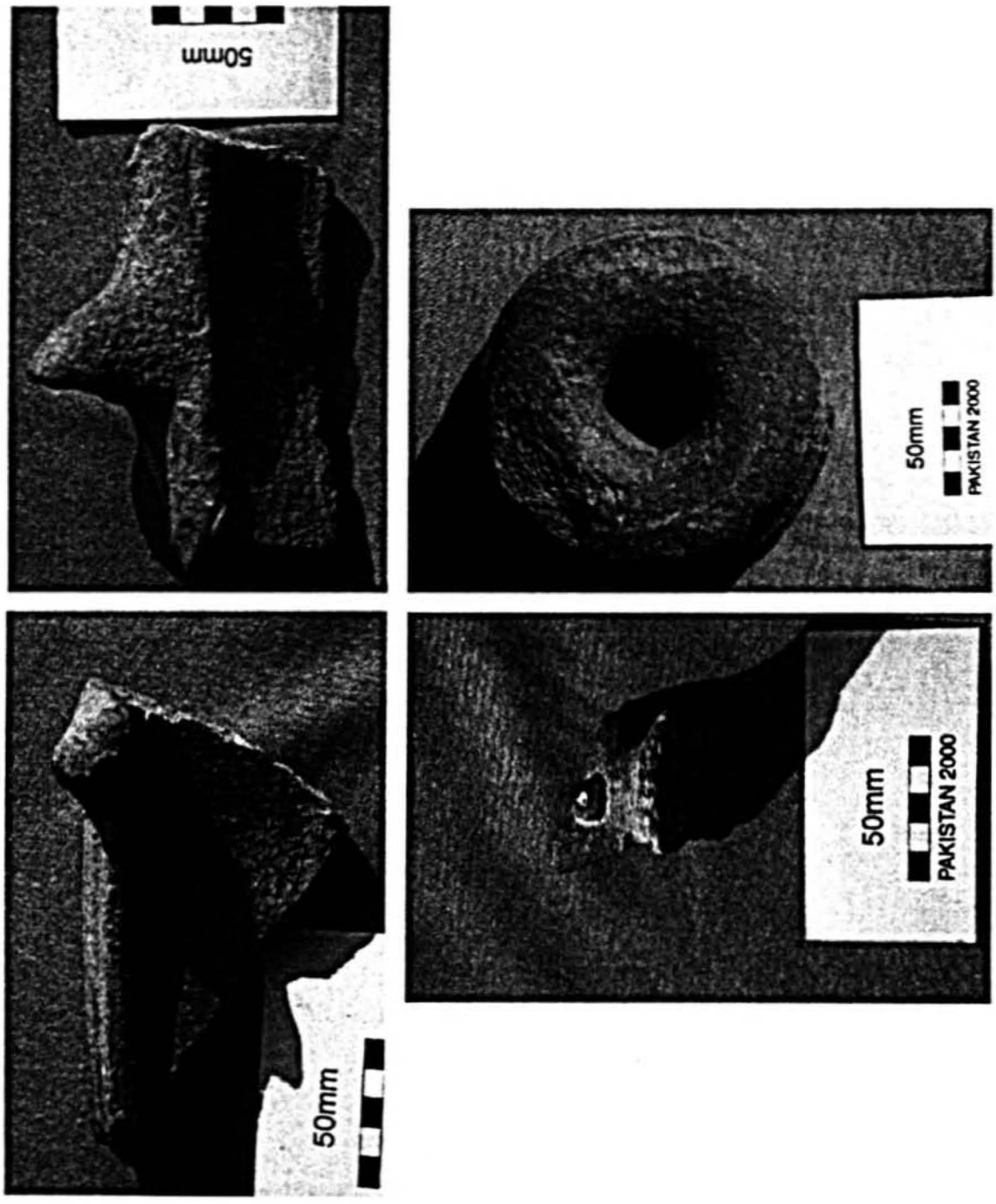


Plate 8.10: Coarse wares
Votive tank (Sf 134). Votive tank (Sf 132). Votive tank bird (Sf 38). Potter's konora (Sf 2011)

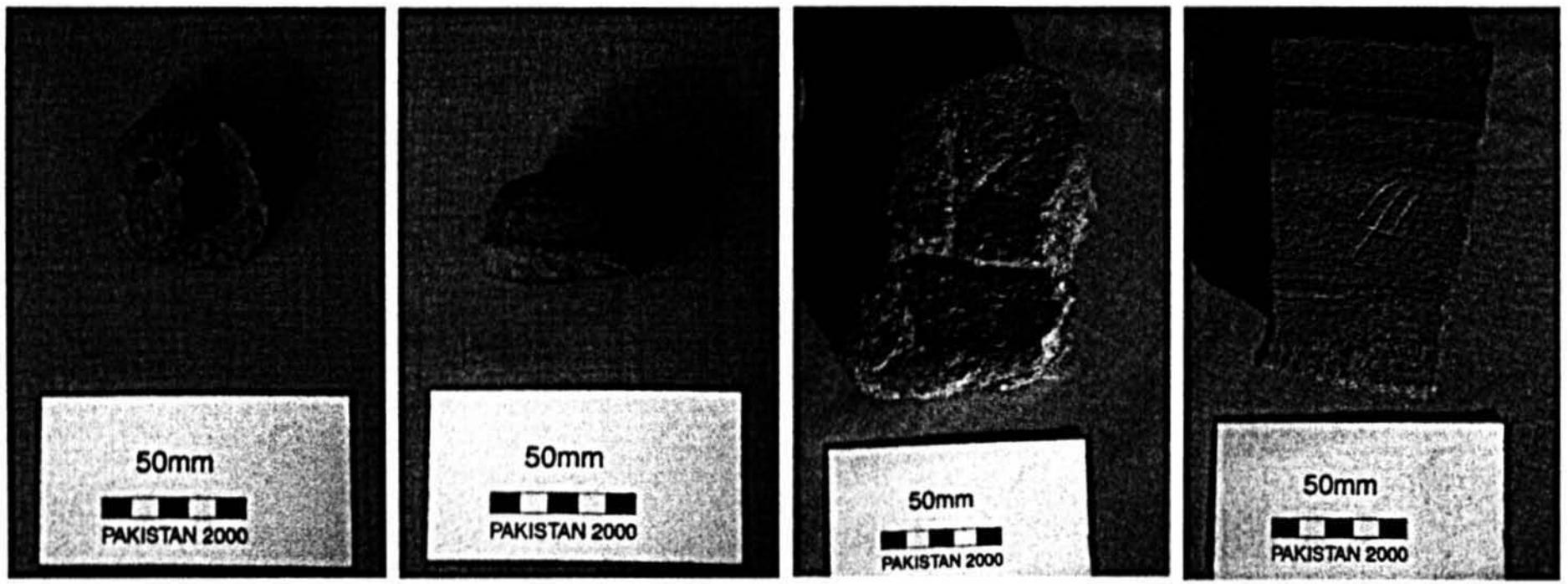


Plate 8.11: Coarse wares
Incense stick stand (Sf 134). Potter's mark on unidentified coarse ware vessel (Sf 105). Potter's mark on unidentified coarse ware vessel (Sf 1171)

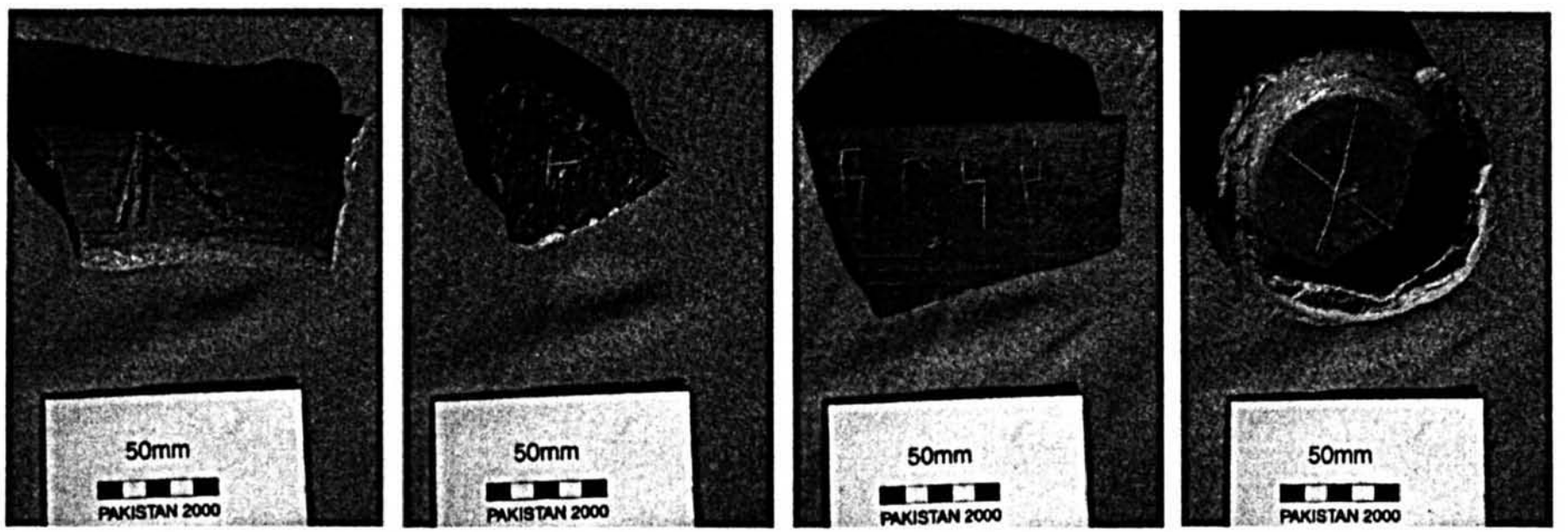


Plate 8.12: Coarse wares
Potter's mark on rippled rim vessel (Sf 283). Potter's mark on Burnished Red Ware (Sf 499). Kharoshthi inscription on unidentified coarse ware vessel (Sf 1078). Potter's mark on Burnished Red ware base (Sf 516)

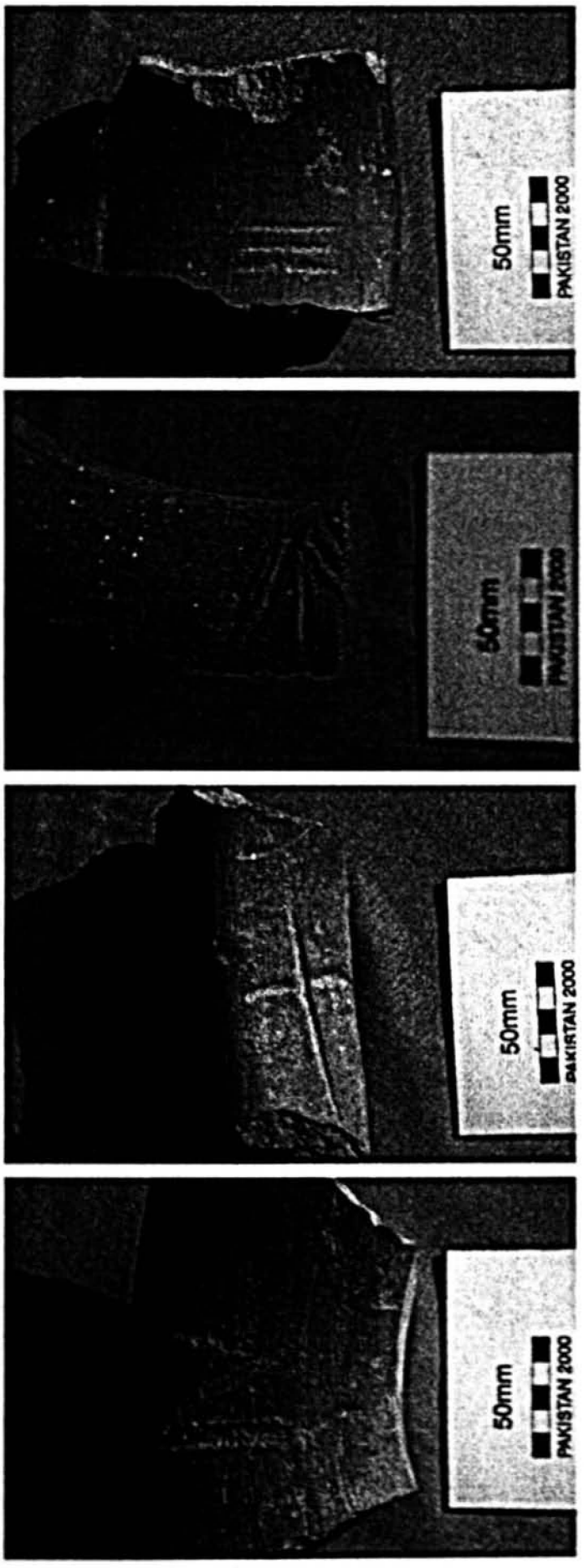


Plate 8.13: Coarse wares
Potter's mark on Burnished Red ware vessel (Sf 123). Potter's mark on rippled rim vessel (Sf 163). Potter's mark on rippled rim vessel (Sf 532). Potter's mark on Burnished Red ware vessel (Sf 533)

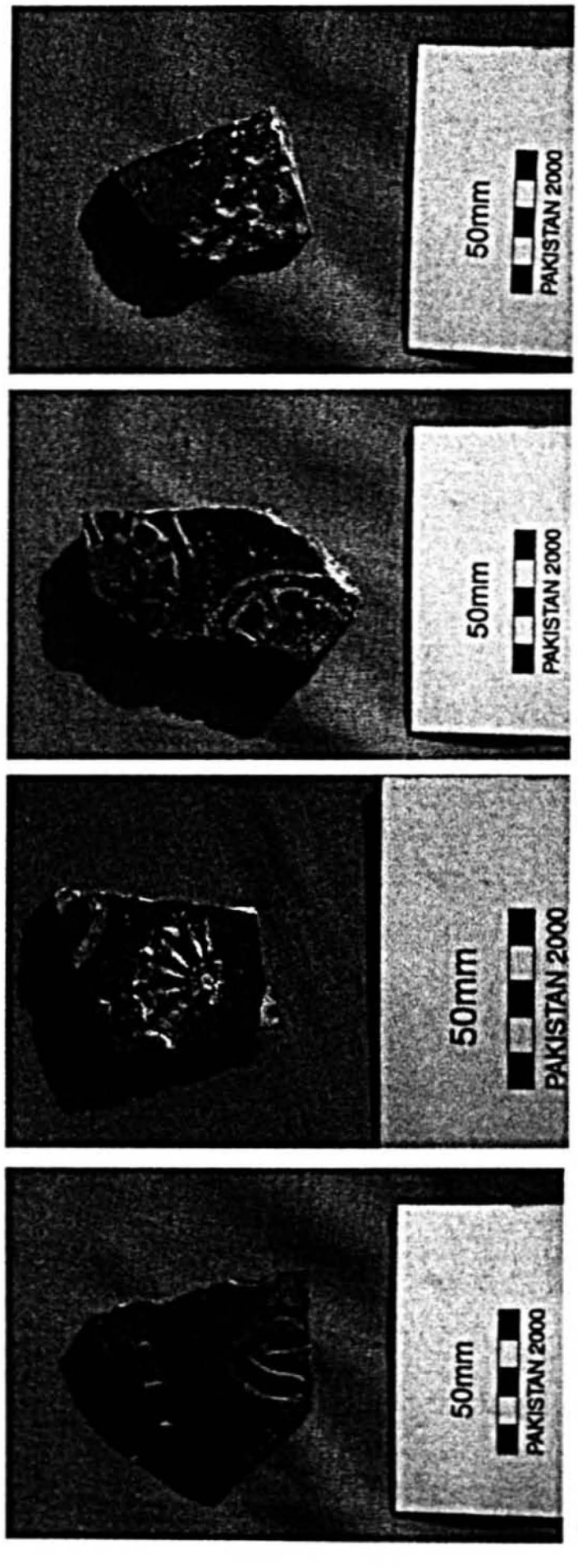


Plate 8.14: Coarse wares
Horseshoe (Sf 521). Rosette (Sf 45). Moulded line and dot (Sf 527). Rosette (Sf 542)

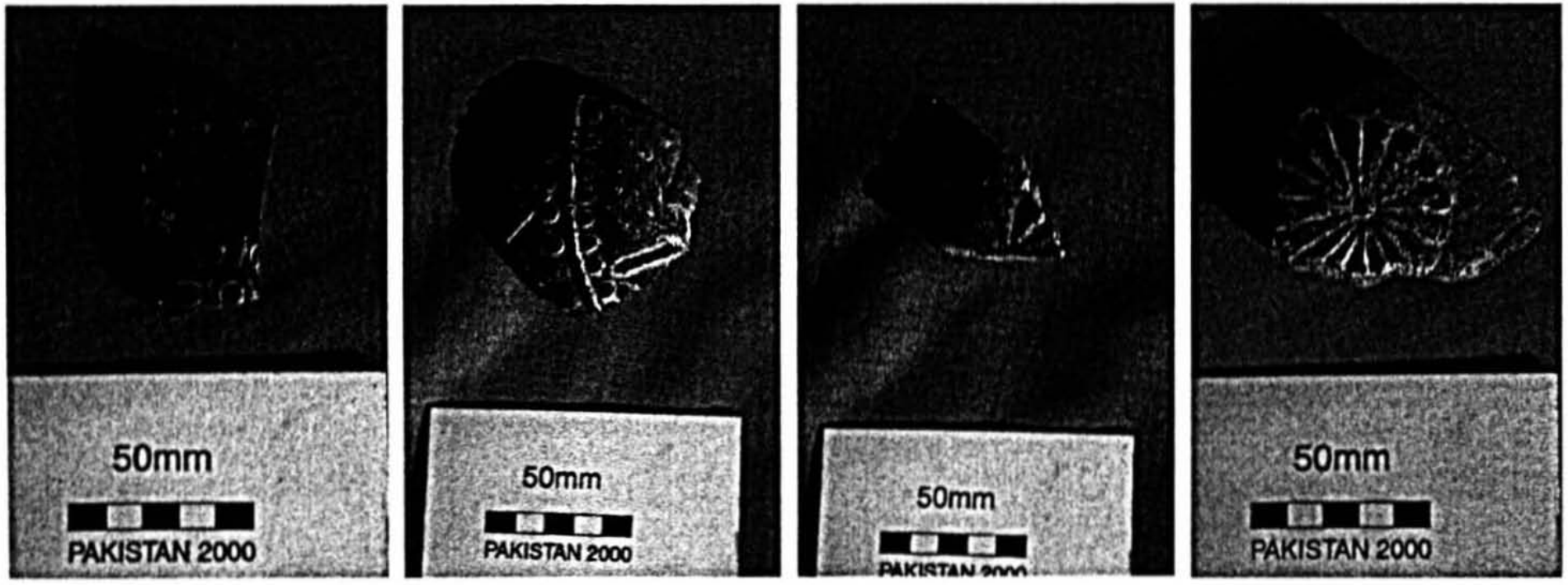


Plate 8.15: Coarse wares
Rosette (Sf 236). Geometric (Sf 196). Lotus (Sf 246). Lotus (Sf 222)

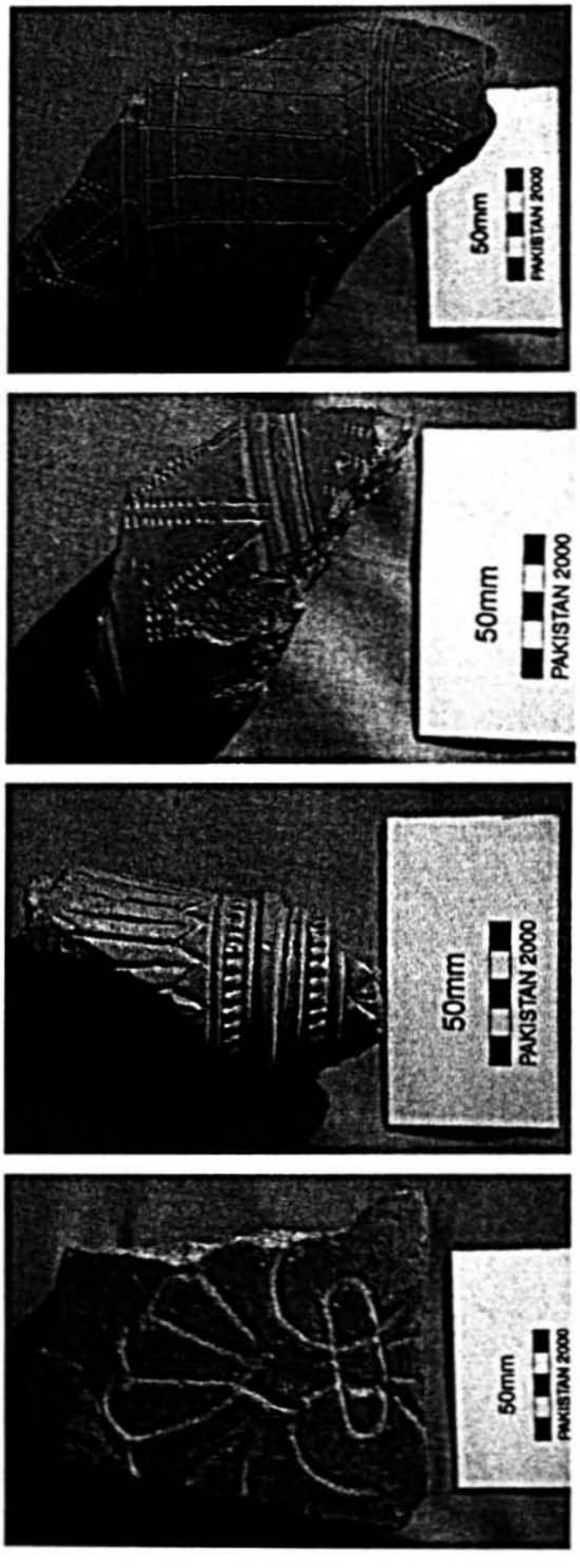


Plate 8.16: Coarse wares

Incised acanthus (Sf 492). Incised geometric (Sf 334). Incised geometric (Sf 853). Incised geometric (Sf 1063)

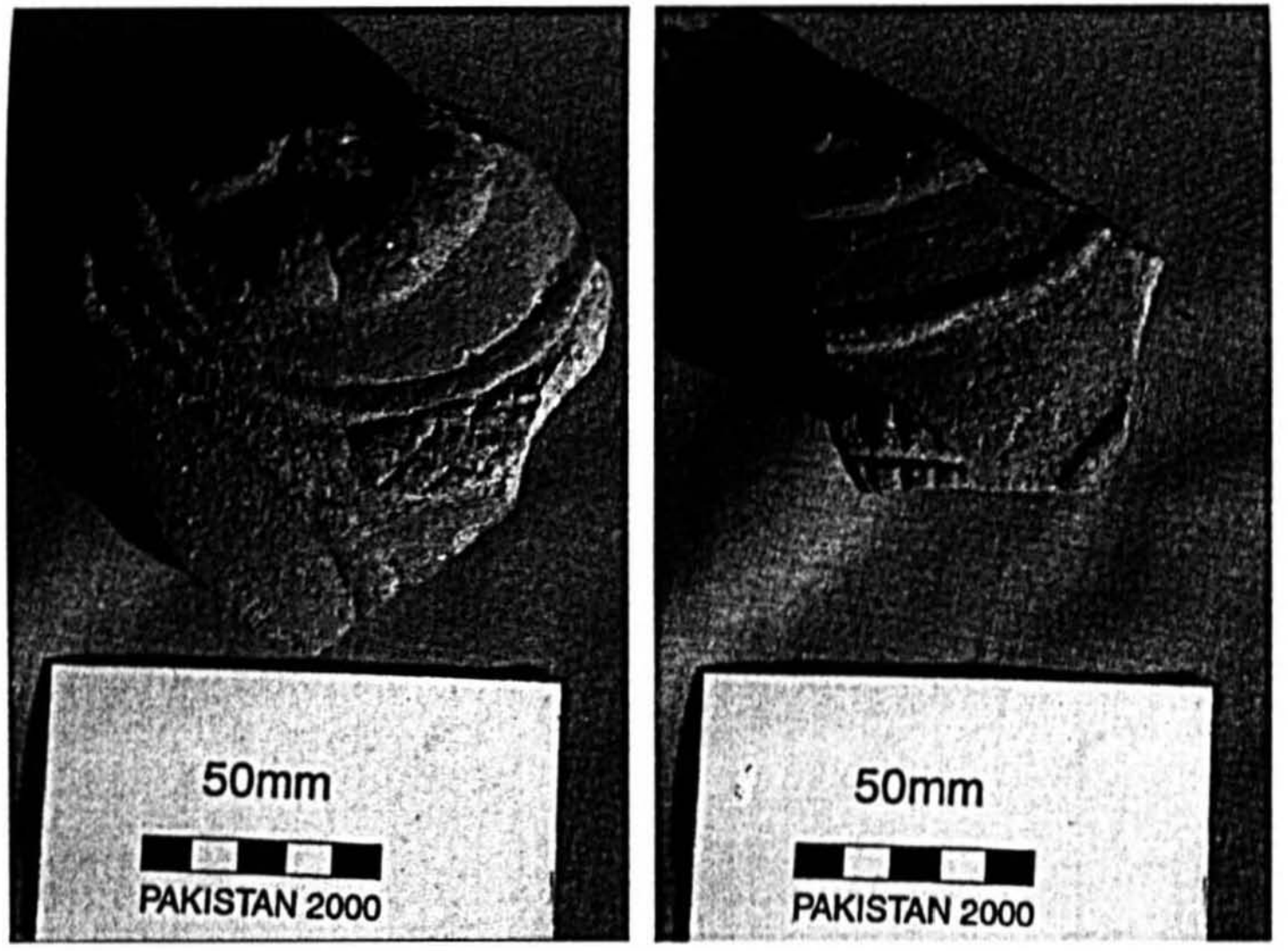


Plate 8.17: Coarse wares
Moulded floral (Sf 145). Moulded floral (Sf 172)

CHAPTER 9

THE METAL OBJECTS AND METAL-WORKING RESIDUES

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9.1 INTRODUCTION

A total of 73 special finds of metal objects and metal-working residues were recovered from the Bala Hisar of Charsadda, weighing a collective 1162.2g (Table 9.1), including iron objects (723.1g), copper alloy (49.9g), gold (0.5g), lead (60.4g) and metal-working residues (328.6g). The objects include iron arrowheads, wire and iron pins, iron nails, bells, kohl sticks, coins, vessels, gold foil, bullets and unidentified iron and copper-alloy objects. Seven objects, weighing 54.8g, were recovered from in-situ archaeological contexts. These included two copper alloy bars making a single kohl stick (Sfs 453 & 480), one copper-alloy vessel base (Sf 518), one unidentifiable copper-alloy object (Sf 504) and three examples of metal-working residues (Sfs 511, 1324 & 7001). With the exceptions of metal-working residue Sf 7001 and copper-alloy object Sf 504, which were recovered from Period III, these artefacts derived from Period II, from a single context, wall melt 71, from which a radiocarbon measurement of between c. 1260 and 900 BC was recovered (GrA-4210), although the presence of associated artefacts would suggest a slightly later date of the first quarter of the first millennium BC (Chapter 7). The presence of a copper-alloy kohl stick (Sfs 453 & 480) in these levels is not surprising as such kohl sticks have been found at Loebanr 3 and Bir-kot-ghwandai from levels dating to Ghaligai Period IV (c. 1700–1400 BC) (Stacul 1994a: 708). The presence of copper-alloy vessel fragment Sf 518 is less common but not unique as a copper cup was recovered from Grave 192 at Timargarha (Dani 1967: 91). These are not necessarily imported exotics as Stacul has published evidence of a stone mould and 'copper casting residue', suggesting the active manufacture of copper-alloy objects at this time in the northern valleys (Stacul 1987: 97). The presence of two fragments of slag (Sfs 511 & 1324) from the same period, however, is more surprising as they represent some of the earliest evidence for iron-working in the region. Indeed the only other iron object from this period was an arrowhead from Loebanr 3, which was judged to be intrusive, although Stacul did note that the question of the date of the introduction of iron metallurgy into this region 'should perhaps be re-examined' (Stacul 1987: 97). It should also be noted that the presence of our two slag fragments in the basal levels of the site is supported by Wheeler's recovery of iron objects in the 'earliest level of the Bala Hisar' (Wheeler 1962: 33), all that is at issue are the very different chronologies. This issue is further discussed below in Sections 9.6 and 9.7. Chapter 9 has been organised by material and will cover iron objects, followed by copper-alloy, gold and lead objects and will conclude with metal-working residues.

9.2 IRON OBJECTS

Iron objects were the most numerous and heavy metal objects recovered from the Bala Hisar (Table 9.1). The 25 objects included three arrowheads (Sfs 31, 476 & 929), three chain or ring fragments (Sfs 30, 262 & 695), one length of wire (Sf 414), three pins (Sfs 16, 162 & 1031), three nails (Sfs 658, 1137 & 1318) and twelve unidentifiable objects. Unfortunately, none of these objects were recovered from contexts still in-situ archaeologically but from disturbed levels. Despite their disturbed nature, it is still possible to make use of the objects by comparison with other collections from excavated sites. Our three arrowheads fall into two groups, with Sfs 476 & 929 having a triangular cross-section with three flanges and Sf 31 having a circular cross-section and two flanges. Examples of the former have been recovered from the uppermost levels at Balambat (Dani 1967: 274) and from 1st century AD Sirkap (Marshall 1951: 549). Pin Sf 16 is mounted with a spherical copper-alloy ball on top and two narrow bands of copper alloy on its shaft but has no analogies. Pin Sf 1031 is a thin length of rolled iron rod with a distinctly twisted neck and broad winged or armed head and it is possible to make analogies between this object and a twisted copper-alloy shaft at Dharmarajika (Marshall 1951: 585) and the armed heads found on copper-alloy pins at Sirkap (Marshall 1951: 586). The complete absence of iron pins at Taxila is notable as earlier sites, such as Timargarha, have pins of both iron and copper and a similar pattern is found at Charsadda. Our other objects are not diagnostic; for example, nails are very long-lived having been found in Sirkap as well as having been recovered from graves at Timargarha (Dani 1967: 194).

9.2.1 Arrowheads

Special find no: 31 Trench: Ch. III Context: 1
Period: VI Weight: 12.5g
Dimensions: 5 x 1.06cm
Description: Incomplete arrowhead. Circular core/shaft with two opposite flanges (blades).
(Figure 9.1)

Special find no: 476 Trench: Ch. III Context: 1
Period: VI Weight: 12.1g
Dimensions: 5.1 x 1.6 x 1.25cm
Description: Incomplete arrowhead. Triangular in cross-section.
(Figure 9.1)

Special find no: 929 Trench: Ch. VIII Context: 1046
Period: V Weight: 12.5g
Dimensions: 6.11 x 1.44cm
Description: Incomplete arrowhead. Triangular in cross-section.
(Figure 9.1)

9.2.2 Chains or rings

Special find no: 30 Trench: Ch. III Context: 1
Period: VI Weight: 1g
Dimensions: 1.63 x 1.43cm; link is 0.4cm thick.
Description: Very small chain fragment.
(Figure 9.1)

Special find no: 262 Trench: Ch. III Context: 1
Period: VI Weight: 4.9g
Dimensions: 3.23 x 3.27 x 0.50cm.
Description: Chain fragment of highly corroded iron. (Possible finger ring)
(Figure 9.1)

Special find no: 695 Trench: Ch. VIII Context: 1008
Period: V Weight: 13g
Dimensions: 3.78 x 2.93 x 1.15cm.
Description: Chain fragment of highly corroded iron. (Possible finger ring)
(Figure 9.1)

9.2.3 Wire

Special find no: 414 Trench: Ch. VI Context: 58
Period: V Weight: 1.2g
Dimensions: 3.3 x 1.1 x 0.45cm
Description: Corroded fragment of wire.

9.2.4 Pins

Special find no: 16 Trench: Ch. III Context: 1
Period: VI Weight: 1.5g
Dimensions: 2.1 x 0.65cm
Description: Iron pin with spherical copper-alloy ball on top and two narrow bands of copper alloy on shaft.
(Figure 9.1; Plate 9.1)

Special find no: 162 Trench: Ch. VI Context: 35
Period: V Weight: 5g
Dimensions: 6.5 x 0.50cm
Description: Pin or bar?

Special find no: 1031 Trench: Ch. IX Context: 1053
Period: VI Weight: 1.5g
Dimensions: 6.1 x 0.2cm. Head is 1cm wide and 0.05cm thick.
Description: Iron pin with twisted neck and broad but thin head.
(Figure 9.1; Plate 9.1)

9.2.5 Nails

Special find no: 658 Trench: Ch. VIII Context: 1006
Period: V Weight: 2.7g
Dimensions: 3.1 x 0.4 x 0.4cm
Description: Tapered nail with square cross-section.

Special find no: 1137 Trench: Ch. VIII Context: 1015
Period: V Weight: 1.7g
Dimensions: 2.9 x 0.4 x 0.3cm
Description: Tapered nail with rectangular cross-section.

Special find no: 1318 Trench: Ch. III Context: 1
Period: VI Weight: 2.8g
Dimensions: 1.86 x 1.45 x 1.46cm
Description: Large-headed nails with square head; tack or nail with round shank?

9.2.6 Unidentifiable objects

Special find no: 15 Trench: Ch. III Context: 1
Period: V Weight: 18.4g
Dimensions: 3.5 x 2.9 x 0.5cm
Description: Rectangular sheet with pierced through centre by shaft.
(Figure 9.1; Plate 9.1)

Special find no: 415 Trench: Ch. VI Context: 58
Period: V Weight: 0.2g
Dimensions: 1.95 x 1.4 x 0.17cm
Description: Coiled wire; part of an iron spring?

Special find no: 442 Trench: Ch. VI Context: 58
Period: V Weight: 0.8g
Dimensions: 1.95 x 1.4 x 0.17cm
Description: Coiled wire; part of an iron spring?

Special find no: 460 Trench: Ch. III Context: 1
Period: VI Weight: 1.9g
Dimensions: 1.7 x 1.5 x 0.15cm
Description: Flat iron sheet.

Special find no: 645 Trench: Ch. VIII Context: 1006
Period: V Weight: 444.4g
Dimensions: 1.14 x 3.2 x 8.92cm
Description: Flat crescent shaped iron object with raised corrosion along outer curve; horse/mule shoe?

Special find no: 667 Trench: Ch. VIII Context: 1003
Period: V Weight: 93.8g
Dimensions: 3.2 x 2.4 x 5cm
Description: Corroded object.

Special find no: 758 Trench: Ch. VIII Context: 1014
Period: V Weight: 8.8g
Dimensions: 4.5 x 0.4 x 0.46cm
Description: Twisted iron sheet fragment.

Special find no: 833 Trench: Ch. VIII Context: 1017
Period: V Weight: 15.8g
Dimensions: 4.51 x 1.56cm
Description: Rounded/bent iron bar, part of ring?
(Figure 9.1)

Special find no: 992 Trench: Ch. VIII Context: 1019
Period: V Weight: 24.7g
Dimensions: 5.5cm x 5.5 x 0.35cm
Description: Corroded plate.

Special find no: 1307 Trench: Ch. VIII Context: 1010
Period: V Weight: 12.7g
Dimensions: 6 x 5 x 4.2cm
Description: Corroded object.

Special find no: 1308 Trench: Ch. VIII Context: 1010
Period: V Weight: 4.5g
Dimensions: 3 x 2.5 x 0.5cm
Description: Corroded object.

9.3 COPPER-ALLOY OBJECTS

A total of ten copper-alloy objects were recovered from the Bala Hisar, including one bell (Sf 998), one pin (Sf 704), three kohl stick fragments (Sfs 453, 480 & 997), two possible coins (Sfs 17 & 311), one vessel fragment (Sf 518) and two unidentified objects (Sfs 504 & 748) (Table 9.1). Four of these fragments were recovered from in-situ archaeological contexts, three from Period II (Sfs 453, 480 & 518) and one from Period III (Sf 504). The latter was recovered from fill 100 of one of the postholes (99) cut into the natural in the vicinity of trench III, very close to ditch cut 2. It dates, through association with radiocarbon measurement GrA-4219 from posthole 139, to c. 770–370 BC. Unfortunately, Sf 504 is an undiagnostic tapered copper-alloy bar of unclear purpose. Sfs 453 and 480 were recovered from context 71, a wall melt with a date of the first quarter of the first millennium BC, and join to make a copper-alloy bar of over 6cm with a splayed and thinned end. This form, a spatula or kohl stick, has analogies with objects from the site of Bir-kot-ghwandai, Ghaligai Period IV (1700–1400 BC) (Stacul 1987: 99). Finally, Sf 518 was also recovered from the same context as Sfs 453–480 and comprises a flat plate section, which has been thickened in the centre. This object has been interpreted as part of the base of a copper-alloy vessel and, although uncommon, is not unique as a copper cup was recovered from Grave 192 at Timargarha (Dani 1967: 91). Unfortunately, the cup was not published but copper-alloy sheet objects have been recovered from Timargarha (Dani 1967: 194), demonstrating sufficient technology for the production of a vessel. Bell Sf 998, pin Sf 704 and kohl stick Sf 997 were all unfortunately recovered from disturbed contexts and are not particularly diagnostic. The two coins, Sf 17 & 311, are also from disturbed contexts and are too worn to aid recognition.

9.3.1 Bells

Special find no: 998 Trench: Ch. IX Context: 1048
Period: V Weight: 3.6g
Dimensions: 2 .90 x 1cm x 2 x 1.82cm
Description: Bell almost complete, missing bead and part of chamber. Hook is a loop oval cross -section, chamber is a flattened cone, loop is perpendicular to length of chamber.
(Figure 9.2; Plate 9.1)

9.3.2 Pins

Special find no: 704 Trench: Ch. VIII Context: 1012
Period: V Weight: 5.4g
Dimensions: 5.28cm long x 0.68cm diameter.
Description: Straight wire length, tapered at both ends.
(Figure 9.2; Plate 9.2)

9.3.3 Kohl sticks

Special find no: 453 Trench: Ch. VI Context: 71
Period: II Weight: 3.7g
Dimensions: 4.63 x 0.62 x 0.50cm
Description: Length of copper-alloy bar shaft joining Sf 480.

Special find no: 480 Trench: Ch. VI Context: 71
Period: II Weight: 8.9g
Dimensions: 4.05 x 1.23 x 0.66cm
Description: Length of copper-alloy bar joining Sf 453 , splayed top. Kohl stick or thick bar?
(Figure 9.2)

Special find no: 997 Trench: Ch. IX Context: 1048
Period: V Weight: 3.8g
Dimensions: 9.82cm long and 0.35cm diameter.
Description: Straight length with rounded and thickened ends, probably a kohl stick?
(Figure 9.2; Plate 9.2)

9.3.4 Coins

Special find no: 17 Trench: Ch. III Context: 1
Period: VI Weight: 1.7g
Dimensions: 1.4cm diameter.
Description: Coin or die (?) with stamped flange. No image on either side.
(Figure 9.2; Plate 9.2)

Special find no: 311 Trench: Ch. III Context: 1
Period: VI Weight: 1.3g
Dimensions: 1.4cm diameter.
Description: Corroded coin or die (?) . No image on either side.
(Figure 9.2)

9.3.5 Vessel base

Special find no: 518 Trench: Ch. VI Context: 71
Period: II Weight: 10.3g
Dimensions: 6.05 x 3.2 x 0.5cm
Description: Flat plate section thickened in centre, possibly part of a vessel.
(Figure 9.2)

9.3.6 Other objects

Special find no: 504 Trench: Ch. VI Context: 72
Period: III Weight: 10.3g
Dimensions: 4.05 x 1.20 x 0.56cm
Description: Tapered bar.
(Figure 9.2)

Special find no: 748 Trench: Ch. VI Context: 1012
Period: V Weight: 0.9g
Dimensions: 3.00 x 0.83 x 0.56cm
Description: Copper-alloy amorphous shape attached to thin plate of iron

9.4 GOLD OBJECTS

A single fragment of gold foil was recovered from within disturbed contexts at the Bala Hisar of Charsadda.

9.4.1 Foil

Special find no: 117 Trench: Ch. VI Context: 35
Period: V Weight: 0.05g
Dimensions: 0.69 x 0.34cm.
Description: Triangular fragment of gold foil.

9.5 LEAD OBJECTS

Seven modern lead bullets with traces of steel casing were recovered from the surface cleaning of trench Ch. III.

9.5.1 Bullets

Special find no: 96 Trench: Ch. III Context: 1
Period: VI Weight: 10.3g
Description: Bullet.

Special find no: 288 Trench: Ch. III Context: 1
Period: VI Weight: 9.6g
Description: Bullet.

Special find no: 359 Trench: Ch. III Context: 1
Period: VI Weight: 7.9g
Description: Bullet.

Special find no: 440 Trench: Ch. III Context: 1
Period: VI Weight: 10.1g
Description: Bullet.

Special find no: 446 Trench: Ch. III Context: 1
Period: VI Weight: 8.2g
Description: Bullet.

Special find no: 446b Trench: Ch. III Context: 1
Period: VI Weight: 8.1g
Description: Bullet.

Special find no: 593 Trench: Ch. III Context: 1
Period: VI Weight: 6.2g
Description: Bullet.

9.6 METAL-WORKING RESIDUES

A total of 30 specimens of metal-working debris were submitted to the Ancient Metallurgy Research Group at the Department of Archaeological Sciences, University of Bradford University, for identification (Table 9.1). The debris included evidence for the working of iron and copper. The earliest iron smelting technology is known as the Direct Method of Iron Production and was a single stage process, hence 'Direct', producing a malleable iron that could be smithed to an artefact. This term was used by Percy (1864: 254) to distinguish the process from the Indirect Process which was a two-stage process that produced liquid cast iron that required a second process to convert it or refine it to a malleable iron (the finery/chafery process, or later the puddling process). The Indirect Method was rapidly adopted in China, but elsewhere the Direct Method provided the bulk of iron until the blast furnace technology of the Indirect Method was adopted, which occurred at different periods in different parts of the world. The complete cycle of manufacturing an iron artefact using the Direct Method from the ore can be divided into three distinct stages (McDonnell 1988: 1995). The smelting of the ore to produce a bloom of iron; the refining and consolidation of the bloom to a billet (primary smithing or bloom smithing); and the shaping of the billet or bar to an artefact (secondary smithing). Secondary smithing also includes the repair and recycling of artefacts.

The iron smelting process performed two equally important functions. Firstly, the reduction of the iron oxide to the metallic state and, secondly, the formation of slag from the gangue products (e.g. silica, alumina etc.) present in the ore and the separation of the slag from the metal. The operation of a furnace is a compromise; iron ore can be readily reduced to the metal at about 800°C, but the temperature has to be elevated to about 1000°C to liquate the slag. These two operations did not occur in the same position within the furnace. The products of the furnace were the metallic bloom and the waste slag and the morphology of the slag was dependent on the method of removal. The metallic lump in the furnace then had to be removed and consolidated through primary smithing or bloom smithing. It may be heterogeneous comprising regions free of other elements, ferritic iron, rich in carbon (steel) or phosphorus (phosphoric iron). All the regions will contain slag as slag inclusions. The product of this process was a billet of iron that could be worked up to an artefact or traded to other centres for smithing into artefacts. The primary or bloom smithing process also generated waste slags and residues (Crew 1991). Secondary smithing involved the manufacture of an iron object and was a complicated and skilled process. All irons and steels had to be worked in the solid state by hot or cold working, joined by (high temperature) fire welding, and often finished by high temperature heat treatments. Distinctions must be made between the many types of smithy that have been used in the past. It is possible to smith

iron on the ground with bellows and a fuel leaving little evidence in the archaeological record. A permanent smithy would have been a more substantial structure, possibly waist high. The smithing process produced residues, in particular scale, and silicate slag in the form of hearth bottoms and smithing slag lumps. Although the mechanism of slag formation is not fully understood (McDonnell 1991), it is vital that all these by-products are recovered, quantified and analysed from archaeological contexts.

There is also evidence from the Bala Hisar that copper alloys were melted, presumably to cast objects but there is no evidence for the smelting of these metals. Secondary copper (alloy) working requires a hearth with bellows to melt the alloys and the melting point depends on the alloy composition, but is of the order of 900–1000°C. The unmelted metal or alloy was placed in a crucible, probably sealed with charcoal to stop oxidation of the metal, heated until melted and then poured into a mould. Crucible fragments can survive, but moulds are temporary artefacts, made of sand or poorly fired clay and therefore do not normally survive well in the archaeological record. Thus there is often very little evidence for the type of artefact being produced. Further details of copper-alloy working may be found in Tylecote (1991) and Craddock (1995). The slags from Charsadda were visually examined and the classification was solely based on morphology and diagnostic slags were distinguished from non-diagnostic residues. The former can be attributed to a particular industrial process; these comprise the iron-working slags, for example smelting or smithing slags, and non-ferrous working debris. The second group, the non-diagnostic residues, could have been generated by a number of different processes but show no diagnostic characteristic that can identify the process. In many cases the non-diagnostic residues, for example hearth or furnace lining, may be ascribed to a particular process through archaeological association. The residue classifications are defined below.

It is assumed that iron-working slag recovered from an excavation is smithing slag unless proved otherwise, but some forms of smelting slag are difficult to distinguish from smithing slag. Despite this problem, no iron smelting slag was identified leaving only three types of iron-working slag identified in the Bala Hisar of Charsadda. These included 19 fragments of smithing slags, randomly shaped pieces of silicate slag generated by the smithing process, and hearth bottoms, plano-convex accumulations of silicate slag formed in the smithing hearth. We also identified five non-diagnostic slags in the form of cinder, a high silica slag that can be formed by high temperature reaction between silica and ferruginous material. Cinder may be ascribed to either the non-diagnostic slags or the diagnostic slags depending on its iron content and morphology. Three further non-diagnostic items were recovered, one crucible fragment (Sf 1309) and two fragments of hearth lining (Sfs 24 & 182). Sf 1309 was a fragment of a ceramic vessel used for melting copper alloy, evidenced by intense vitrification and slagging and with entrapped particles of metal adhering to its surface. Two non-ferrous diagnostic residues were also recovered, comprising copper-working slags (Sfs 209 & 111). As some iron smithing slags contained evidence of copper-alloy working in the form of corroded copper alloy, it is assumed that the smith worked both iron and copper in the same hearth. Only three of the metal-working residues were recovered from in-situ archaeological deposits, Sfs 511, 1324 & 7001. The latter (Sf 7001) is interesting as it suggests the presence of iron-working at the site between c. 770 and 370 BC, but the remaining two artefacts (Sfs 511 & 1324) are of great significance as they come from context 71, dated to the first quarter of the first millennium BC, making this evidence for iron-working amongst the oldest within the region (Section 9.7).

Special find no: 24 Trench: Ch. VI Context: 4
Period: VI Weight: 27.1g
Description: **Hearth lining.**

Special find no: 110 Trench: Ch. VI Context: 4
Period: VI Weight: 25.8g
Description: **Iron smelting? light tap.**

Special find no: 111 Trench: Ch. VI Context: 4
Period: VI Weight: 20.5g
Description: **Copper-alloy slag.**

Special find no: 182 Trench: Ch. VI Context: 4
Period: VI Weight: 13g
Description: **Hearth lining.**

Special find no: 198 Trench: Ch. VI Context: 35
Period: V Weight: 12.9g
Description: **Iron slag with vitrified material.**

Special find no: 200 Trench: Ch. VI Context: 35
Period: V Weight: 3.7g
Description: **Cinder.**

Special find no: 209 Trench: Ch. VI Context: 5
Period: VI Weight: 4.6g
Description: **Copper-alloy slag.**

Special find no: 249 Trench: Ch. III Context: 1
Period: VI Weight: 6.2g
Description: **Iron slag.**

Special find no: 284 Trench: Ch. VI Context: 54
Period: V Weight: 1.8g
Description: **Iron slag.**

Special find no: 285 Trench: Ch. VI Context: 6
Period: VI Weight: 20g
Description: **Iron slag.**

Special find no: 286 Trench: Ch. VIII Context: 1006
Period: V Weight: 0.5g
Description: **Iron slag.**

Special find no: 301 Trench: Ch. III Context: 1
Period: VI Weight: 8g
Description: **Smithing hammer scale spheroid?**

Special find no: 333 Trench: Ch. VI Context: 58
Period: V Weight: 7g
Description: **Iron slag.**

Special find no: 391 Trench: Ch. VIII Context: 1008
Period: V eight: 0.9g
Description: **Iron slag.**

Special find no: 465 Trench: Ch. VI Context: 41
Period: V Weight: 6.3g
Description: **Iron slag.**

Special find no: 511 Trench: Ch. VI Context: 71
Period: II Weight: 0.3g
Description: **Iron slag with vitrified material.**

Special find no: 648 Trench: Ch. VIII Context: 1006
Period: V Weight: 1g
Description: **Iron slag.**

Special find no: 678 Trench: Ch. VIII Context: 1006
Period: V Weight: 0.9g
Description: **Iron slag.**

Special find no: 703 Trench: Ch. VIII Context: 1003
Period: V Weight: 49.3g
Description: **Iron slag.**

Special find no: 1309 Trench: Ch. VIII Context: 1010
Period: V Weight: 5.9g
Description: **Crucible fragment.**
(Plate 9.2)

Special find no: 1310 Trench: Ch. VIII Context: 1008
Period: V Weight: 12.3g
Description: **Iron slag with vitrified material.**

Special find no: 1317 Trench: Ch. VI Context: 7
Period: VI Weight: 2.3g
Description: **Iron slag.**

Special find no: 1320 Trench: Ch. VIII Context: 1003
Period: V Weight: 0.8g

Description: Iron slag with vitrified material.

Special find no: 1321 Trench: Ch. III Context: 1
Period: VI Weight: 0.8g
Description: Iron slag.

Special find no: 1324 Trench: Ch. VI Context: 71
Period: II Weight: 5.9g
Description: Flowed iron slag with vitrified material.

Special find no: 1326 Trench: Ch. VIII Context: 1003
Period: V Weight: 39.5g
Description: Cinder.

Special find no: 1327 Trench: Ch. VIII Context: 1003
Period: V Weight: 15.4g
Description: Cinder.

Special find no: 1328 Trench: Ch. VIII Context: 1003
Period: V Weight: 6.2g
Description: Cinder.

Special find no: 1329 Trench: Ch. VIII Context: 1003
Period: V Weight: 15.1g
Description: Cinder.

Special find no: 7001 Trench: Ch. III Context: 100
Period: III Weight: 15.4g
Description: Iron slag.

9.7 CONCLUSION

The antiquity of iron-working in South Asia has been an issue of academic debate since the diffusionistic model of Sir Mortimer Wheeler (1959) was first challenged in the late 1960s and 1970s by Indian scholars (Tewari 2003: 536). Wheeler, one of the most influential British scholars working in South Asia, frequently stressed his view that the expansion of the Persian empire into the subcontinent in the late 6th century BC had resulted in the supply of 'new materials and ideas; above all, with the use of iron, which now appears in India for the first time' (1959: 171). This model was also forcefully used in Wheeler's monograph of his excavations at the Bala Hisar of Charsadda, where he stated that 'There is no good evidence that iron was known to the northern plains of India before the latter part of the 6th century BC and it is a fair inference that the knowledge or exploitation of metal in the subcontinent accompanied the absorption of the north-western principalities into the Achaemenid Empire at that time' (Wheeler 1962: 13). He further clarified this point in the monograph's chronology chapter as he anchored the early sequence of the site to the 6th century BC on account of the presence of iron objects in the lowest levels (Wheeler 1962: 33–34). N.R. Banerjee was one of the first scholars to counter this date in his book on the Indian Iron Age, suggesting that iron-working could be extended back to the beginning of the first millennium BC (1965). His synthesis has been actively supported by a number of Indian scholars since, including Chakrabarti (1976), Sahi (1979) and Agrawal (*et al.* 1985). The evidence of iron-working slag at the Bala Hisar of Charsadda in levels dating to the first quarter of the first millennium BC further supports their claims. Even earlier evidence of between c. 1800 and 900 BC has also been cited from the Ganga plain and the Eastern Vindhyas, supported by radiocarbon dates (Tewari 2003: 543). Whilst not in a position to comment on Tiwari's very early dates until the fuller publication of his data, it may be noted that our own dates from Charsadda fit within Tewari's second group of iron-working in c. 1200–900 BC and correspond with those from Pirak in Baluchistan, where iron-working is noted at a similar early date (Jarrige & Santoni 1979: 374). This additional evidence from the Bala Hisar of Charsadda reinforces the presence of a pattern of iron-working throughout South Asia by the first quarter of the first millennium BC, from Sri Lanka in the south (McDonnell *et al.* 2006) to the central Ganga (Tewari 2003) and into Baluchistan (Jarrige & Santoni 1979) and now the Vale of Peshawar. Within this pattern, one may also discern the presence of a number of earlier developments including the central Ganga and the Vale of Peshawar, firmly refuting Wheeler's model and supporting those scholars arguing for a review of the traditional models for the development and spread of iron-working within South Asia.

	PERIODS	II	III	IV	V	VI	Totals
Iron arrowheads	no.				1	2	3
	wt. (g)				12.5	24.6	37.1
Iron chains	no.				1	2	3
	wt. (g)				13	5.9	18.9
Iron wire	no.				1		1
	wt. (g)				1.2		1.2
Iron pins	no.				1	2	3
	wt. (g)				5	3	8
Iron nails	no.				2	1	3
	wt. (g)				4.4	2.8	7.2
Iron unidentified	no.				11	1	12
	wt. (g)				648.8	1.9	650.7
Copper-alloy bells	no.				1		1
	wt. (g)				3.6		3.6
Copper-alloy pins	no.				1		1
	wt. (g)				5.4		5.4
Copper-alloy kohl	no.	2			1		3
	wt. (g)	12.6			3.8		16.4
Copper-alloy coins	no.					2	2
	wt. (g)					3	3
Copper-alloy vessels	no.	1					1
	wt. (g)	10.3					10.3
Copper unidentified	no.		1		1		2
	wt. (g)		10.3		0.9		11.2
Gold foil	no.				1		1
	wt. (g)				0.5		0.5
Lead bullets	no.					7	7
	wt. (g)					60.4	60.4
Metal-working residues	no.	2	1		17	10	30
	wt. (g)	6.2	15.4		178.7	128.3	328.6
Totals	no.	5	2		39	27	73

Table 9.1: Metal objects

Figure 9.1: Metal objects (1:1)
Iron arrowheads (Sfs 31, 476 & 929). Iron chain (Sf 30). Iron chain or ring fragments (Sfs 262 & 695). Iron pins (Sf 16 & 1031). Iron sheet and shaft (Sf 15). Iron ring fragment (Sf 833)

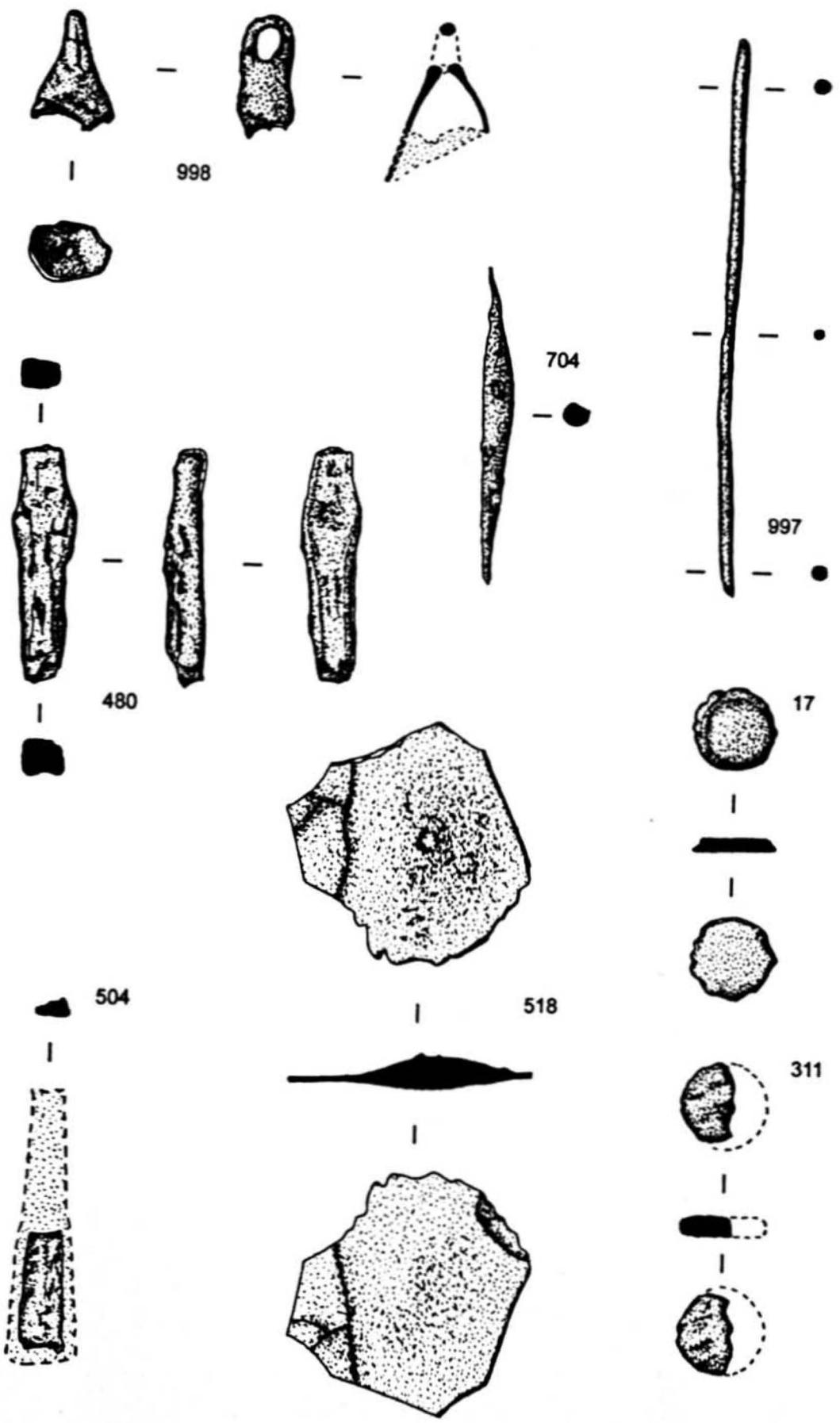

Figure 9.2: Metal objects (1:1)
Copper-alloy objects: bell (Sf 998), pin (Sf 704), kohl stick (Sfs 997 & 480), coin (Sf 17), coin (Sf 311), vessel base (Sf 518), tapered bar (Sf 504)

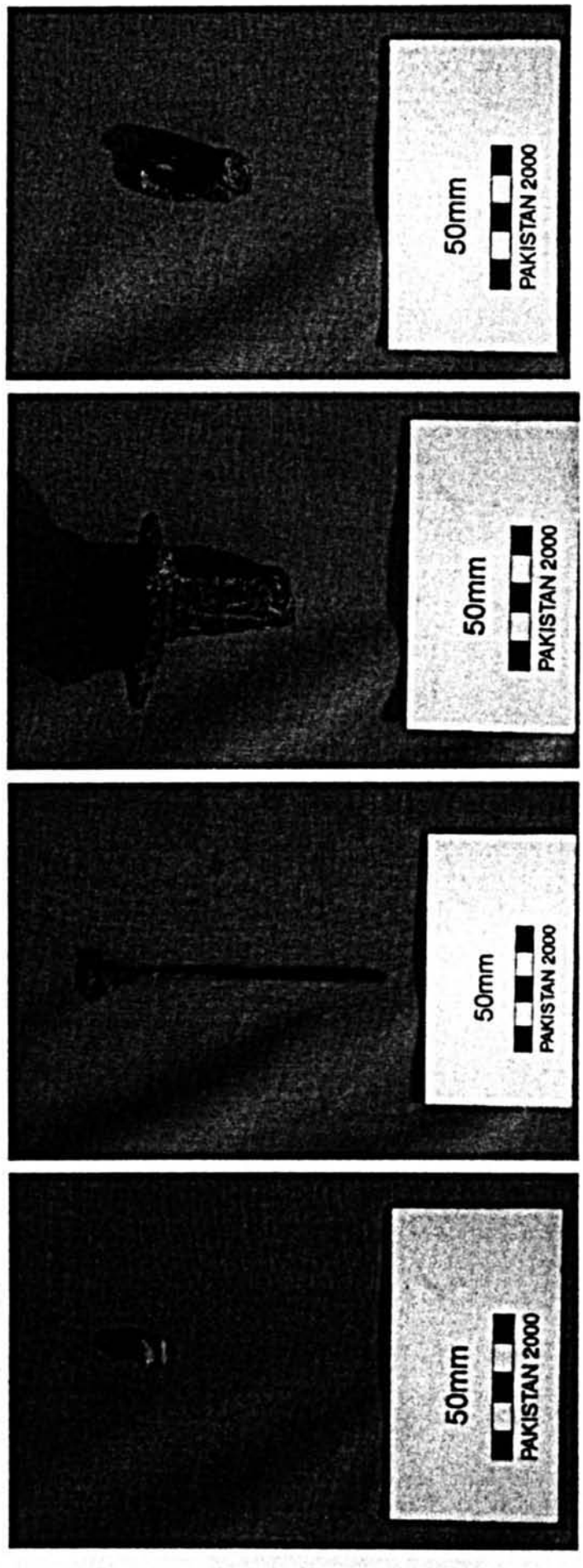

Plate 9.1: Metal objects
Iron pin with copper-alloy head (Sf 16). Iron pin (Sf 1031). Iron sheet and shaft (Sf 15). Copper-alloy bell (Sf 998)

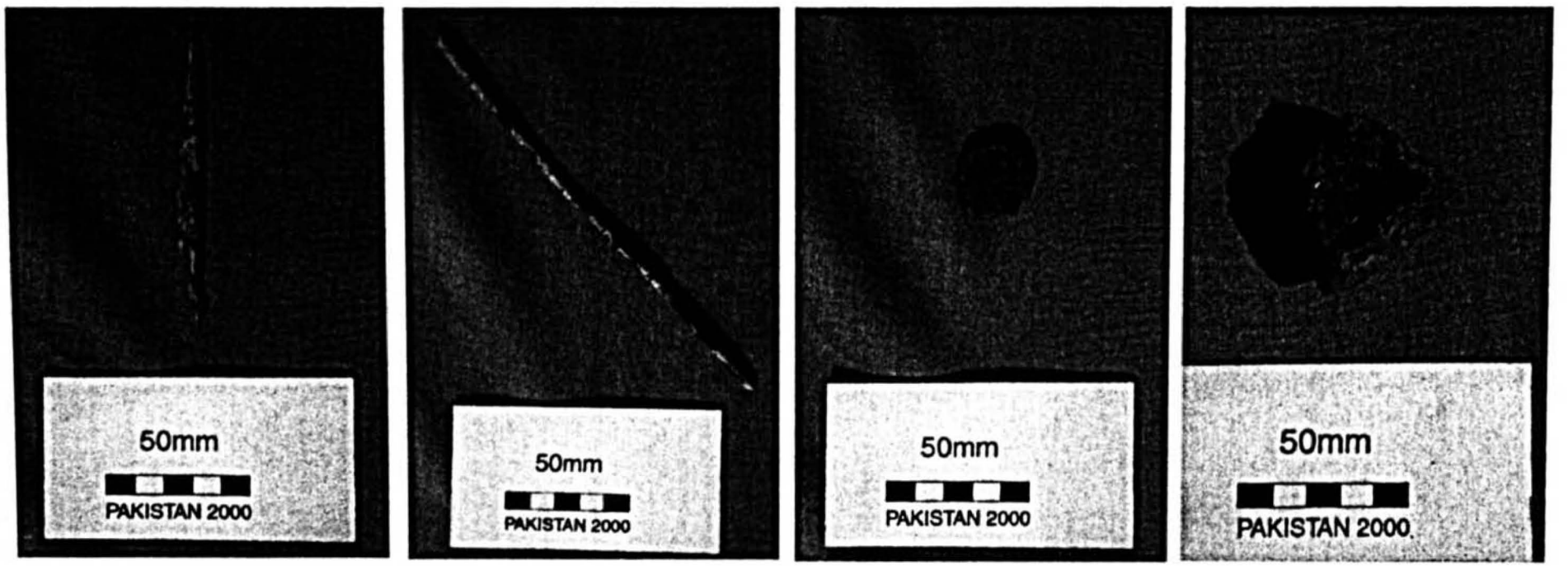

Plate 9.2: Metal objects
Copper-alloy pin (Sf 704). Copper-alloy kohl stick (Sf 997). Copper-alloy coin (Sf 17). Crucible (Sf 1309)

CHAPTER 10

THE GLASS OBJECTS

Robin Coningham

10.1 INTRODUCTION

A total of 175 glass fragments (163.2g) were recovered from trenches Ch. III, VI and CIII/IX at the Bala Hisar of Charsadda (Table 10.1). These comprised 13 fragments of vessels, 65 plain bangles, four spiral bangles, 28 inlaid and decorated bangles, two rings, one jewellery insert, 40 beads and 22 fragments of unformed and ingot glass. Bangles represented the heaviest category with 91.39g, followed by 39g of unformed and ingot glass, 14.7g of beads, 14.5g of vessel sherds and smaller categories of rings (3g) and jewellery inserts (0.7g). Only five objects were recovered from in-situ archaeological contexts, the other 170 objects having come from mixed deposits or modern wash. The five objects (Sfs 292, 481, 493, 515 & 1131) include three glass bangles and two beads. Only one of these artefacts (Sf 493) was recovered from Period III and is an incomplete bangle of dark blue glass with a D-shaped cross-section. It derived from context 66, the fill of trench Ch. III's ditch 55, which has a date of c. 410 and 770 BC. Three objects were recovered from Trench VI, one red barrel bead (Sf 292) from ditch cut 61 and two incomplete bangles (Sfs 481 & 515) from wall melt context 71, with dates to c. 1270–900 BC. The final 'in-situ' object (Sf 1131) was a white spherical bead from context 1091, trench Ch. VIII. Context 1091 is the fill of pit 1091, itself cut into old land surface 1077, which has a date of between c. 1050 and 1310 BC.

10.2 GLASS VESSELS

A total of 13 fragments of glass vessels were recovered from the excavations (14.5g). These comprised two rims, one base and 10 body sherds. All were recovered from the disturbed contexts of Periods V and VI and most (9 examples) from the backfill of Wheeler's trench III. It is unfortunate that none of our fragments were considered diagnostic as finds of Roman and Hellenistic glass vessels have been reported from Ai Khanoun, Begram and Taxila as well as other sites in southern India (Coningham 2004). With dates of between the 4th and 1st centuries BC, the Greek city of Ai Khanoun only yielded a single sherd, whilst Marshall reported a wide variety of types from Sirkap (c. 175 BC–100 AD) (Marshall 1951: 685–689). The latter's rich corpus is paralleled by the treasure from the Kushan city at Begram (Hackin 1939). In comparison there was a notable absence of glass vessels from Wheeler's excavations at Charsadda (1962) and even from Dani's trenches at the later settlement of Shaikhan Dheri (1966).

10.2.1 Rims

Special find no: 365 | Trench: Ch. III | Context: 1
Period: VI | Weight: 0.9g
Material: Glass | Dimensions: 2.22 x 1.35cm | Thickness: 0.09cm
Description: Outward folded rim fragment from straight-sided beaker of colourless glass.

Special find no: 380 | Trench: Ch. III | Context: 1
Period: VI | Weight: 3.4g
Material: Glass | Dimensions: 3.56 x 3.15cm | Thickness: 0.12cm
Description: Outward folded rim fragment from straight-sided beaker of colourless glass.

10.2.2 Bases

Special find no: 447 | Trench: Ch. III | Context: 1
Period: VI | Weight: 0.3g
Material: Glass | Dimensions: 1.46 x 0.61cm | Thickness: 0.06cm
Description: Convex base fragment from straight-sided vial of colourless glass.

10.2.3 Bodysherds

Special find no: 2 | Trench: Ch. III | Context: 1
Period: VI | Weight: 1.2g
Material: Glass | Dimensions: 1.18 x 1.70cm | Thickness: 0.48cm
Description: Curved sherd of opaque brown glass (heavily patinated)

Special find no: 41 | Trench: Ch. VI | Context: 5
Period: VI | Weight: 0.2g
Material: Glass | Dimensions: 1.28 x 0.73cm | Thickness: 0.37cm
Description: Tightly curved sherd (or neck) of opaque yellow/white glass.

Special find no: 224 | Trench: Ch. VI | Context: 37
St Period: V | Weight: 0.6g
Material: Glass | Dimensions: 1.65 x 1.08cm | Thickness: 0.24cm
Description: Curved sherd from straight sided vessel of semi-translucent green glass (with slight patina).

Special find no: 379 | Trench: Ch. III | Context: 1
Period: VI | Weight: 1.7g
Material: Glass | Dimensions: 2.16 x 1.85cm | Thickness: 0.42cm
Description: Tightly curved sherd (or neck) of translucent olive-green glass with many air bubbles and external patination.

Special find no: 390 | Trench: Ch. III | Context: 1
Period: VI | Weight: 1.4g
Material: Glass | Dimensions: 1.91 x 2.23cm | Thickness: 0.18cm
Description: Outward bending sherd fragment from beaker of colourless glass.

Special find no: 421 | Trench: Ch. III | Context: 1
Period: VI | Weight: 0.4g
Material: Glass | Dimensions: 1.65 x 0.82cm | Thickness: 0.28cm
Description: Curved body sherd (or neck) of highly degraded opaque green/yellow glass.

Special find no: 436 | Trench: Ch. III | Context: 1
Period: VI | Weight: 0.2g
Material: Glass | Dimensions: 1.11 x 0.66cm | Thickness: 0.16cm
Description: Curved sherd of translucent green/yellow glass with many bubbles.

Special find no: 444 | Trench: Ch. VI | Context: 58
Period: V | Weight: 0.6g
Material: Glass | Dimensions: 1.44 x 0.79cm | Thickness: 0.31cm
Description: Flat sherd of opaque black/dark blue glass heavily patinated on one side.

Special find no: 448 | Trench: Ch. III | Context: 1
Period: VI | Weight: 1.8g
Material: Glass | Dimensions: 1.83 x 2.23cm | Thickness: 0.25cm
Description: Curved sherd of translucent green/yellow glass with many bubbles (and externally patinated.

Special find no: 656 | Trench: Ch. VIII | Context: 1006
Period: V | Weight: 1.8g
Material: Glass | Dimensions: 1.93 x 0.85cm | Thickness: 0.13cm
Description: Curved sherd of translucent green/yellow glass with many bubbles.

10.3 GLASS BANGLES

As noted in Section 10.1, bangles represent the heaviest category of glass objects recovered from the Bala Hisar of Charsadda with a combined weight of 91.39g. This weight included 65 plain bangles, four spiral bangles, 28 inlaid and decorated bangles. Of these 97 bangles, only three (Sfs 493, 481 & 515) were recovered from 'in-situ' contexts. The oldest examples (Sfs 481 & 515) were both recovered from period II from wall 71, a context with radiocarbon dates of c. 1270–900 BC. Sf 481 is an incomplete bangle of dark blue or black glass with a D-shaped cross-section and Sf 515 an incomplete bangle of similar colour, also with a D-shaped cross-section. Although they are similar in colour and cross-section, they are not from the same bangle, as their diameters appear to differ, 5cm and 6cm respectively. The youngest example, Sf 493, comes from Period III and was recovered from one of the fills of defensive ditch 55, which has dates of c. 770–410 BC. Whilst the presence of glass objects may be puzzling in such early levels, it should be noted that seven glass bangles were also recovered from Dani's excavations at Balambat, four from Balambat period III and a further three from period IV (1967: 283). As Balambat period III is roughly equivalent to the beginning and first quarter of the first millennium BC (Dani 1967: 239; Vogelsang 1988: 103), the evidence from Charsadda further support the suggestion that the presence of glass 'is certainly older then that of the Bhir Mound' (Dani 1967: 282). Reference should also be made to the two equally early bangles from levels associated with Painted Grey Ware at Hastinapura (Lal 1955: 13). The remaining 60 bangles at the Bala Hisar were recovered from the mixed context of Periods V and VI but other sites have provided a clear sequence with the introduction of spiral examples by the 1st century AD (Marshall 1951), augmenting plain types (Marshall 1951), whilst polychrome bangles clearly date to the first millennium AD (Dikshit 1969: 34; Coningham 2004).

10.3.1 Plain dark blue/black glass bangles

Special find no: 52 Trench Ch. III Context: 1
Period: VI Weight: 0.9g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 6% survives; 7cm diameter, 0.7cm wide, 0.5cm thick.
Comments: D -shaped cross-section.

Special find no: 62 Trench Ch. VI Context: 6
Period: VI Weight: 1.4g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 6% survives; 7cm diameter, 0.6cm wide, 0.8cm thick.
Comments: circular cross-section.

Special find no: 64 Trench Ch. VI Context: 6
Period: VI Weight: 0.4g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 21% survives; 7cm diameter, 0.7cm wide, 0.3cm thick.
Comments: D shaped cross-section.

Special find no: 66 Trench Ch. VI Context: 7
Period: VI Weight: 0.9g
Description: Incomplete bangle of opaque black/dark blue glass.
Dimensions: Fragment survives; N/A diameter, 1.1cm wide, 0.4cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 67 Trench Ch. VI Context: 7
Period: VI Weight: 0.6g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 3.5% survives; 7cm diameter, 0.7cm wide, 0.4cm thick.
Comments: B shaped cross-section.

Special find no: 100 Trench Ch. VI Context: 7
Period: VI Weight: 3.3g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 24% survives; 6cm diameter, 0.8cm wide, 0.5cm thick.
Comments: D shaped cross-section
(Figure 10.1)

Special find no: 185 Trench Ch. VI Context: 37
Period: V Weight: 1.1g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 6.5% survives; 6cm diameter, 0.8cm wide, 0.4cm thick.
Comments: Oval shaped cross-section.

Special find no: 187 Trench Ch. VI Context: 35
Period: V Weight: 1.8g
Description: Incomplete bangle of heavily patinated opaque black/dark glass.
Dimensions: 20% survives; 4.0cm diameter, 0.7cm wide, 0.6cm thick.
Comments: Fat D shaped cross-section.

Special find no: 215 Trench Ch. III Context: 1
Period: VI Weight: 0.4g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 3% survives; 9.0cm diameter, 0.6cm wide, 0.4cm thick.
Comments: D shaped cross-section.

Special find no: 266 Trench Ch. III Context: 1
Period: VI Weight: 1.7g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 11% survives; 6cm diameter, 0.9cm wide, 0.4cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 275 Trench Ch. III Context: 1
Period: VI Weight: 0.6g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 3.5% survives; 7cm diameter, 0.8cm wide, 0.4cm thick.
Comments: D shaped cross-section.

Special find no: 294 Trench Ch. VI Context: 54
Period: V Weight: 0.8g
Description: Incomplete bangle of patinated black/dark blue glass.
Dimensions: Fragment survives; N/A diameter, 0.7cm wide, 0.6cm thick.
Comments: Sub-angular shaped cross-section.

Special find no: 316 Trench Ch. VI Context: 58
Period: V Weight: 2.4g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 13% survives; 5cm diameter, 0.9cm wide, 0.5cm thick.
Comments: Flattened D shaped cross-section with grooves running around the bangle on the outside edges.

Special find no: 320 Trench Ch. III Context: 1
Period: VI Weight: 0.4g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 17% survives; 4cm diameter, 0.5cm wide, 0.5cm thick.
Comments: Circular cross-section.

Special find no: 332 Trench Ch. VI Context: 58
Period: V Weight: 3.2g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 30% survives; 4cm diameter, 0.8cm wide, 0.4cm thick.
Comments: D shaped cross-section.

Special find no: 339 Trench Ch. III Context: 1
Period: VI Weight: 1.5g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 12% survives; 7cm diameter, 0.8cm wide, 0.4cm thick.
Comments: D shaped cross-section.

Special find no: 366 Trench Ch. VI Context: 58
Period: V Weight: 1.3g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 10% survives; 7cm diameter, 0.8cm wide, 0.5cm thick.
Comments: D shaped cross-section.

Special find no: 372 Trench Ch. VI Context: 38
Period: V Weight: 2.8g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 25% survives; 5cm diameter, 0.8cm wide, 0.4cm thick.
Comments: D-shaped cross-section.

Special find no: 388 Trench Ch. VI Context: 58
Period: V Weight: 1.5g
Description: Incomplete bangle of opaque dark blue/black glass, consisting of eight pieces.
Dimensions: 10% survives; 7cm diameter, 1.0cm wide, 0.5cm thick.
Comments: D shaped cross-section.

Special find no: 422 Trench Ch. III Context: 1
Period: VI Weight: 0.3g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 3% survives; 6cm diameter, 0.5cm wide, 0.3cm thick.
Comments: Rectangular shaped cross-section.

Special find no: 429 Trench Ch. III Context: 1
Period: VI Weight: 0.3g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 3% survives; 7cm diameter, 0.5cm wide, 0.3cm thick.
Comments: D shaped cross-section.

Special find no: 431 Trench Ch. VI Context: 58
Period: V Weight: 0.8g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 4% survives; 6cm diameter, 0.7cm wide, 0.4cm thick.
Comments: D shaped cross-section.

Special find no: 432 Trench Ch. VI Context: 58
Period: V Weight: 1.1g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 6% survives; 7cm diameter, 0.6cm wide, 0.4cm thick.
Comments: D shaped cross-section.

Special find no: 446 Trench Ch. III Context: B
Period: VI Weight: 0.3g
Description: Incomplete bangle of opaque dark blue/black glass.
Comments: Fragment survives; N/A diameter.

Special find no: 456 Trench Ch. III Context: 1
Period: VI Weight: 0.4g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 3% survives; 7cm diameter, 0.7cm wide, 0.3cm thick.
Comments: D shaped cross-section.

Special find no: 479 Trench Ch. III Context: 1
Period: VI Weight: 0.4g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 6% survives; 8cm diameter, 0.4cm wide, 0.4cm thick.
Comments: Circular shaped cross-section.

Special find no: 481 Trench Ch. VI Context: 71
Period: II Weight: 1.7g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 6% survives; 5cm diameter, 0.9cm wide, 0.5cm thick.
Comments: D shaped cross-section.

Special find no: 484 Trench Ch. III Context: 64
Period: V Weight: 0.8g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 6% survives; 5cm diameter, 0.6cm wide, 0.5cm thick.
Comments: D shaped cross-section.

Special find no: 491 Trench Ch. III Context: 1
Period: VI Weight: 1.1g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 7% survives; 6cm diameter, 0.9cm wide, 0.4cm thick.
Comments: D shaped cross-section.

Special find no: 493 Trench Ch. VI Context: 66
Period: III Weight: 1.5g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 8% survives; 7cm diameter, 0.9cm wide, 0.4cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 515 Trench Ch. VI Context: 71
Period: II Weight: 1.3g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 3% survives; 6cm diameter, 0.9cm wide, 0.6cm thick.
Comments: D shaped cross-section.

Special find no: 541 Trench Ch. VII Context: 7
Period: VI Weight: 3.4g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 20% survives; 6cm diameter, 1.0cm wide, 0.5cm thick.
Comments: D shaped cross-section.

Special find no: 555 Trench Ch. VI Context: 7
Period: VI Weight: 1.8g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 4% survives; 7cm diameter, 1.0cm wide, 0.4cm thick.
Comments: Rectangular shaped cross-section.

Special find no: 556 Trench Ch. VI Context: 7
Period: VI Weight: 1.7g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 6% survives; 8cm diameter, 0.7cm wide, 0.7cm thick.
Comments: Circular shaped cross-section.

Special find no: 683 Trench Ch. VIII Context: 1003
Period: V Weight: 1.4g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 8% survives; 6.5cm diameter, 1.0cm wide, 0.4cm thick.
Comments: D shaped cross-section.

10.3.2 Plain blue glass bangles

Special find no: 8 Trench: Ch. III Context: 1
Period: VI Weight: 0.2g
Description: Incomplete bangle of heavily patinated semi-translucent blue/green glass.
Dimensions: Fragment survives; N/A diameter, 0.7cm wide, 0.4cm thick.
Comments: D shaped cross-section.

Special find no: 10 Trench: Ch. III Context: 1
Period: VI Weight: 0.4g
Description: Incomplete bangle of semi-translucent blue glass.
Dimensions: 4% survives; 7.0cm diameter, 0.6cm wide, 0.3cm thick.
Comments: D shaped cross-section.

Special find no: 39 Trench: Ch. III Context: 1
Period: VI Weight: 0.4g
Description: Incomplete bangle of semi-translucent blue/green glass.
Dimensions: 10% survives; 6.0cm diameter, 0.6cm wide, 0.3cm thick.
Comments: D shaped cross-section.

Special find no: 68 Trench: Ch. VI Context: 7
Period: VI Weight: 0.6g
Description: Incomplete bangle of semi-translucent blue/green glass.
Dimensions: Fragment survives; N/A diameter, 0.8cm wide, 0.3cm thick.
Comments: Rectangular shaped cross-section.

Special find no: 278 Trench: Ch. III Context: 1
Period: VI Weight: 0.3g
Description: Incomplete bangle of patinated opaque dark blue glass.
Dimensions: Fragment survives; N/A diameter, 0.5cm wide, 0.7cm thick.
Comments: D shaped cross-section.

Special find no: 338 Trench: Ch. III Context: 1
Period: VI Weight: 0.8g
Description: Incomplete bangle of semi-translucent blue/green glass.
Dimensions: Fragment survives; N/A diameter, 0.6cm wide, 0.6cm thick.
Comments: Circular shaped cross-section.

Special find no: 357 Trench: Ch. VI Context: 38
Period: V Weight: 1.4g
Description: Incomplete bangle of heavily patinated semi-translucent blue/green glass.
Dimensions: 6% survives; 8.0cm diameter, 0.6cm wide, 0.6cm thick.
Comments: Circular shaped cross-section.

Special find no: 367 Trench: Ch. VI Context: 58
Period: V Weight: 0.3g
Description: Incomplete bangle of opaque cobalt blue glass.
Dimensions: 6% survives; 7cm diameter, 0.3cm wide, 0.2cm thick.
Comments: D shaped cross-section.

Special find no: 384 Trench: Ch. III Context: 1
Period: VI Weight: 0.1g
Description: Incomplete bangle of heavily patinated opaque light blue glass.
Dimensions: Fragment survives; N/A diameter, 0.4cm wide, 0.3cm thick.
Comments: Square shaped cross-section.

Special find no: 413 Trench: Ch. VI Context: 58
Period: V Weight: 0.5g
Description: Incomplete ring of translucent and slightly degraded semi-translucent blue glass.
Dimensions: 20% survives; 3cm diameter, 0.5cm wide, 0.2cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 423 Trench: Ch. III Context: 1
Period: VI Weight: 0.3g
Description: Incomplete bangle of patinated and degraded semi-translucent blue/green glass.
Dimensions: Fragment survives; N/A diameter, 0.6cm wide, 0.3cm thick.
Comments: D shaped cross-section.

Special find no: 435 Trench: Ch. III Context: 1
Period: VI Weight: 0.2g
Description: Incomplete bangle of patinated and degraded semi-translucent blue/green glass.
Dimensions: Fragment survives; N/A diameter, 0.4cm wide, 0.4cm thick.
Comments: Circular shaped cross-section.

Special find no: 470 Trench: Ch. III Context: 1
Period: VI Weight: 0.4g
Description: Incomplete (two pieces) bangle of white patinated opaque light blue glass.
Dimensions: Fragment survives; N/A diameter, 0.5cm wide, 0.5cm thick.
Comments: Square cross-section.

Special find no: 472 Trench: Ch. III Context: 64
Period: V Weight: 0.3g
Description: Incomplete bangle of translucent blue/green glass.
Dimensions: Fragment survives; N/A diameter, 0.3cm wide, 0.9cm thick.
Comments: Flat with rounded edges cross-section.

Special find no: 477 Trench: Ch. III Context: 1
Period: VI Weight: 0.6g
Description: Incomplete bangle of degraded semi-translucent blue glass.
Dimensions: 10% survives; 5cm diameter, 0.3cm wide, 0.6cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 490 Trench: Ch. VI Context: 1
Period: VI Weight: 0.5g
Description: Incomplete bangle of translucent green/blue glass.
Dimensions: Fragment survives; N/A diameter, 0.3cm wide, 0.9cm thick.
Comments: Flat with rounded edges cross-section.

Special find no: 553 Trench: Ch. VI Context: 7
Period: VI Weight: 0.2g
Description: Incomplete bangle of opaque blue glass.
Dimensions: 6% survives; 7cm diameter, 0.3cm wide, 0.3cm thick.
Comments: Circular shaped cross-section.

Special find no: 557 Trench: Ch. VI Context: 7
Period: VI Weight: 0.9g
Description: Incomplete bangle of slightly patinated opaque blue glass.
Dimensions: Fragment survives; N/A diameter, 0.4cm wide, 0.9cm thick.
Comments: D shaped cross-section.

Special Finds No.: 883 Trench No.: VI Context: 1018
Period: V Weight: <0.1g
Description: Fragment of blue translucent bangle, very fine, glass.
Dimensions: damaged; 0.3cm wide, 0.2cm thick; 0.3 cm wide, 0.2 cm thick.
Comments: Triangular cross-section.

Special find no: 1133 Trench: Ch. VIII Context: 1004
Period: V Weight: 1.2g
Description: Incomplete bangle of white patinated blue green glass.
Dimensions: 15% survives; 8cm diameter, 0.5cm wide, 0.4cm thick.
Comments: Square shaped cross-section

Special find no: 1136 Trench: Ch. VIII Context: 1003
Period: V Weight: 1.3g
Description: Incomplete bangle of opaque pale blue glass.
Dimensions: 6% survives; 7.0cm diameter, 0.6cm wide, 0.6cm thick.
Comments: Circular cross-section.

10.3.3 Plain brown glass bangles

Special find no: 469 Trench: Ch. III Context: 1
Period: VI Weight: 0.5g
Description: Incomplete bangle of lightly patinated and degraded brown glass.
Dimensions: Fragment survives; N/A diameter, 0.5cm wide, 0.4cm thick.
Comments: D shaped cross-section.

Special find no: 682 Trench: Ch. VIII Context: 1003
Period: V Weight: 0.4g
Description: Incomplete bangle of opaque red /brown coloured glass.
Dimensions: 14% survives; 6cm diameter, 0.29cm wide, 0.31cm thick.
Comments: D shaped cross-section.

Special find no: 1134 Trench: Ch. VIII Context: 1003
Period: V Weight: 0.4g
Description: Incomplete bangle of opaque red/brown coloured glass.
Dimensions: 12% survives; 6.0cm diameter, 0.4cm wide, 0.21cm thick.
Comments: D shaped cross-section.

10.3.4 Plain green glass bangles

Special find no: 437 Trench: Ch. VI Context: 64
Period: V Weight: 1.5g
Description: Incomplete bangle of opaque green glass.
Dimensions: Fragment survives; N/A diameter, 0.7cm wide, 0.8cm thick.
Comments: Fat D shaped cross-section.

Special find no: 694 Trench: Ch. VIII Context: 1003
Period: V Weight: 1.09g
Description: Incomplete bangle (two pieces) of translucent pale green glass.
Dimensions: 35% survives; 6.0cm diameter, 0.3cm wide, 0.2cm thick.
Comments: Squared D shaped cross-section.

Special find no: 723 Trench: Ch. VIII Context: 1012
Period: V Weight: 0.3g
Description: Incomplete bangle of opaque green/blue glass.
Dimensions: Fragment survives; N/A diameter, 0.5cm wide, 0.4cm thick.
Comments: D shaped cross-section.

Special find no: 819 Trench: Ch. VIII Context: 1003
Period: V Weight: 0.9g
Description: Incomplete bangle of translucent green/blue glass.
Dimensions: Fragment survives; N/A diameter, 0.6cm wide, 0.6cm thick.
Comments: Circular shaped cross-section.

Special find no: 870 Trench: Ch. VIII Context: 1020
Period: V Weight: 0.1g
Description: Incomplete bangle (two fragments) of thin translucent green/blue glass.
Dimensions: 6% survives; 6cm diameter, 0.3cm wide, 0.2cm thick.
Comments: Rectangular shaped cross-section.

10.3.4 Plain yellow glass bangles

Special find no: 791 Trench: Ch. VIII Context: 1000
Period: VI Weight: 0.5g
Description: Incomplete bangle of opaque yellow glass.
Dimensions: Fragment survives; N/A diameter, 0.6cm wide, 0.6cm thick.
Comments: Circular shaped cross-section.

10.3.5 Spiral glass bangles

Special find no: 184 Trench: Ch. VI Context: 37
Period: V Weight: 2.2g
Description: Incomplete spiral bangle of tightly twisted opaque pale green glass.
Dimensions: 32% survives; 4cm diameter, 0.5cm wide, 0.5cm thick.
Comments: Circular shaped cross-section.

Special find no: 670 Trench: Ch. VIII Context: 1003
Period: V Weight: 0.9g
Description: Incomplete spiral bangle of opaque green/blue glass.
Dimensions: 13% survives; 5cm diameter, 0.4cm wide, 0.4cm thick.
Comments: Circular shaped cross-section.

Special find no: 834 Trench: Ch. VIII Context: 1017
Period: V Weight: 1.4g
Description: Incomplete spiral bangle of opaque green glass.
Dimensions: 10% survives; 6cm diameter, 0.6cm wide, 0.6cm thick.
Comments: Circular shaped cross-section.

Special find no: 869 Trench: Ch. VIII Context: 1019
Period: V Weight: 0.5g
Description: Incomplete spiral bangle of tightly twisted translucent cobalt blue glass.
Dimensions: 6% survives; 6cm diameter, 0.5cm wide, 0.5cm thick.
Comments: Circular shaped cross-section.

10.3.5 Inlaid, layered, ribbed and threaded bangles

Special find no: 36 Trench: Ch. III Context: 1
Period: VI Weight: 0.2g
Description: Incomplete bangle of pale blue/green glass with yellow layer on exterior surface.
Dimensions: Fragment survives; N/A cm diameter, 0.5cm wide, 0.3cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 53 Trench: Ch. III Context: 1
Period: VI Weight: 0.6g
Description: Incomplete bangle of black/dark blue glass inlaid with traces of alternating white and red angular bands across external surface.
Dimensions: 10% survives; 6cm diameter, 0.4cm wide, 0.4cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 54 Trench: Ch. III Context: 1
Period: VI Weight: 0.3g
Description: Incomplete bangle of yellow glass with yellow 'knobbly' appliqué on exterior and centrally located white thread on interior.
Dimensions: Fragment survives; N/A diameter, 0.4cm wide, 0.4cm thick.
Comments: Triangular shaped cross-section.

Special find no: 65 Trench: Ch. VI Context: 7
Period: VI Weight: 1.8g
Description: Incomplete bangle of black/dark blue glass inlaid with alternating white and red angular bands across external surface.
Dimensions: 23% survives; 5cm diameter, 0.5cm wide, 0.3cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 124 Trench: Ch. III Context: 1
Period: VI Weight: 0.4g
Description: Incomplete ribbed bangle fragment of translucent blue glass with thin white thread around interior surface.
Dimensions: Fragment survives; N/A cm diameter, 0.8cm wide, 0.3cm thick.
Comments: Ribbed shaped cross-section.

Special find no: 174 Trench: Ch. III Context: 1
Period: VI Weight: 0.7g
Description: Incomplete ribbed bangle of heavily patinated opaque blue/green glass with ribs at each edge.
Dimensions: Fragment survives; N/A diameter, 1.4cm wide, 0.4cm thick.
Comments: Squared C-shaped cross-section.

Special find no: 210 Trench: Ch. VI Context: 37
Period: V Weight: 0.8g
Description: Incomplete bangle of black/dark blue glass inlaid with alternating white and red angular bands across external surface.
Dimensions: 22% survives; 4cm diameter, 0.4cm wide, 0.3cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 217 Trench: Ch. VI Context: 1
Period: VI Weight: 1.4g
Description: Incomplete bangle of opaque yellow glass with rib at one edge.
Dimensions: 6% survives; 6cm diameter, 1.0cm wide and 0.5cm thick.
Comments: Flattened D-shaped cross-section.

Special find no: 319 Trench: Ch. III Context: 1
Period: VI Weight: 0.9g
Description: Incomplete bangle of opaque black/dark blue glass with yellow inlay; patinated on exterior surface.
Dimensions: Fragment survives; N/A cm diameter, 1.0cm wide and 0.5cm thick.
Comments: Flattened D-shaped cross-section.

Special find no: 341 Trench: Ch. III Context: 1
Period: VI Weight: 3.3g
Description: Incomplete bangle of opaque dark blue/black glass with two raised rims of yellow appliqué.
Dimensions: 14% survives; 6.cm diameter, 1.0cm wide, 0.6cm thick.
Comments: D shaped cross-section.

Special find no: 350 Trench: Ch. III Context: 1
Period: VI Weight: 1.5g
Description: Incomplete bangle of black/dark blue with inlaid splashes of yellow glass across exterior and thin line of red glaze around both edges.
Dimensions: 14% survives; 6cm diameter, 0.6cm wide and 0.3cm thick.
Comments: Flattened D-shaped cross-section.

Special find no: 352 Trench: Ch. VI Context: 58
Period: V Weight: 0.2g
Description: Incomplete bangle of black/dark blue glass inlaid with alternating yellow and red angular bands across external surface.
Dimensions: Fragment survives; N/A cm diameter, 0.4cm wide, 0.3cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 371 Trench: Ch. VI Context: 38
Period: V Weight: 0.8g
Description: Incomplete bangle of black/dark blue glass inlaid with alternating white and red angular bands across external surface.
Dimensions: 7% survives; 7cm diameter, 0.5cm wide, 0.3cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 377 Trench: Ch. VI Context: 38
Period: V Weight: 1.0g
Description: Incomplete bangle of black/dark blue glass inlaid with alternating white and red angular bands across external surface.
Dimensions: 12% survives; 7cm diameter, 0.5cm wide, 0.3cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 409 Trench: Ch. VI Context: 58
Period: V Weight: 1.5g
Description: Incomplete bangle of opaque dark blue/black glass.
Dimensions: 6% survives; 5cm diameter, 0.9cm wide, 0.6cm thick.
Comments: Flattened D shaped cross-section with groove around the outside of one edge.

Special find no: 412 Trench: Ch. VI Context: 58
Period: V Weight: 0.4g
Description: Incomplete bangle of translucent pale blue glass with impressed 'z' on exterior surface.
Dimensions: 12% survives; 6cm diameter, 0.4cm wide, 0.3cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 416 Trench: Ch. VI Context: 58
Period: V Weight: 0.5g
Description: Incomplete bangle of black/dark blue glass inlaid with alternating yellow and red angular bands across external surface.
Dimensions: 12% survives; 4.0cm diameter, 0.5cm wide, 0.3cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 417 Trench: Ch. VI Context: 58
Period: V Weight: 0.2g
Description: Incomplete bangle of black/dark blue glass inlaid with white glass with red angular bands of glass across external surface.
Dimensions: Fragment survives; N/A cm diameter, 0.5cm wide, 0.4cm thick.
Comments: Squared D shaped cross-section.

Special find no: 434 Trench: Ch. VI Context: 58
Period: V Weight: 0.2g
Description: Incomplete bangle of black/dark blue glass inlaid with alternating yellow and red angular bands across external surface.
Dimensions: Fragment survives; N/A cm diameter, 0.5cm wide, 0.3cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 443 Trench: Ch. VI Context: 58
Period: V Weight: 0.2g
Description: Incomplete bangle of black/dark blue glass inlaid with alternating yellow and red angular bands across external surface.
Dimensions: Fragment survives; N/A cm diameter, 0.5cm wide, 0.3cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 455 Trench: Ch. III Context: 1
Period: VI Weight: 0.5g
Description: Incomplete bangle of black/dark blue glass with inlaid green and yellow perpendicular 'v' pattern on external surface.
Dimensions: 6% survives; 6cm diameter, 0.5cm wide, 0.3cm thick.
Comments: Rectangular shaped cross-section.

Special find no: 464 Trench: Ch. VI Context: 58
Period: V Weight: 1.0g
Description: Incomplete bangle of black/dark blue glass inlaid with alternating red and white angular bands across external surface.
Dimensions: 6% survives; 7cm diameter, 0.7cm wide, 0.4cm thick.
Comments: Squared D shaped cross-section.

Special find no: 467 Trench: Ch. III Context: 1
Period: VI Weight: 0.7g
Description: Incomplete bangle of opaque black/dark blue base with central line of opaque red and appliqué yellow spheres of glass.
Dimensions: Fragment survives; N/A diameter, 0.7cm wide, 0.4cm thick.
Comments: Rectangular shaped cross-section.

Special find no: 489 Trench: Ch. III Context: 64
Period: V Weight: 0.5g
Description: Incomplete bangle of black/dark blue glass inlaid with alternating light and dark green angular bands across external surface.
Dimensions: 5% survives; 7cm diameter, 0.5cm wide, 0.3cm thick.
Comments: Flattened D shaped cross-section.

Special find no: 681 Trench: Ch. VIII Context: 1003
Period: V Weight: 0.8g
Description: Incomplete rippled bangle of translucent white glass with layered tensile on external edge.
Dimensions: 12% survives; 7cm diameter, 0.3cm wide, 0.5cm thick.
Comments: Squared wave shaped cross-section.

Special find no: 721 Trench: Ch. VIII Context: 1012
Period: V Weight: 2.8g
Description: Incomplete ribbed/ridged (3) bangle of translucent blue/green glass with yellow internal threading on one edge.
Dimensions: 12% survives; 5cm diameter, 1.7cm wide, 0.4cm thick.
Comments: Ribbed (3) shaped cross-section.

Special find no: 882 Trench: Ch. VIII Context: 1018
Period: V Weight: 0.3g
Description: Incomplete ribbed/ridged (3) bangle of opaque black/dark blue glass inlaid red and yellow alternating stripe pattern.
Dimensions: Fragment survives; N/A cm diameter, 0.35cm wide, 0.30cm thick.
Comments: Squared D-shaped cross-section.

Special find no: 1132 Trench: Ch. VIII Context: 1012
Period: V Weight: 2.3g
Description: Incomplete bangle of opaque flecked grey with orange glaze and blue and white repeating 'eyes'.
Dimensions: 26% survives; 6cm diameter, 0.5cm wide and 0.4cm thick.
Comments: Fat D-shaped cross-section.

10.4 RINGS

Only two glass rings were found during the excavations at the Bala Hisar of Charsadda (3g). One green (Sf 410) and one blue (Sf 594), both were recorded in the uppermost levels of the site in contexts belonging to Periods V and VI.

Special Find no: 410 Trench Ch. VI Context: 58
Period: VI Weight: 1.7g
Description: Incomplete ring of lightly patinated opaque green glass.
Dimensions: 30% survives; 2cm diameter, 0.5cm wide, 0.5cm thick.
Comments: Square shaped cross-section.

Special Find No.: 594 Trench No.: Ch. VI Context: 35
Period: V Weight: 1.3g
Description: Two fragments of dark blue/black glass ring.
Dimensions: 60% survives; 2.5cm diameter; 0.3 cm wide, 0.3 cm thick.
Comments: Circular cross-section.

10.5 GLASS JEWELLERY INSERT

One glass jewellery insert (Sf 1059) was recovered from the excavations at the Bala Hisar of Charsadda. This green object weighed only 0.7g and was recorded in the robber pit fills of Period V.

Special Find No. 1059 Trench: Ch. IX Context: 1072
Period: V Weight: 0.7g
Material: Glass Dimensions: 0.49 x 1.00cm
Description: Opaque pale green circular object with a flattened D shaped profile. Possibly a jewellery insert.

10.6 GLASS BEADS

A total of 40 beads were recovered from the recent excavations at the Bala Hisar of Charsadda, weighing a total 14.7g. The most numerous category of bead shape was barrel with 10 examples, followed by 9 spherical disc beads, 8 spherical beads, 6 unseparated beads, two conical beads, one disc bead, one multi-faceted bead and 3 beads whose original shape had been distorted out of recognition through heat or was too badly damaged to ascertain. The presence of uncut beads of a spherical disc shape suggests incompletely worked materials, perhaps indicating bead-working on the site. Only two beads were excavated within in-situ contexts (Sfs 292 & 1131), the remaining 38 having been found in the mixed and disturbed levels of Periods V and VI. The first example (Sf 292) is a red spherical disc-shaped bead, recovered from context 57 of Trench VI. Part of the fill of pit/ditch 61, it is part of Period II and has dates of c. 1270–930 BC. Sf 1131, the second example, consists of three fragments of a white spherical bead, possibly part of a conical shaped bead, recovered from context 1091 of Trench VIII. Context 1091 is part of the fill of pit cut 1092 and is cut into an old land surface, which dates to c. 1310–1050 BC. As in the case of glass bangles, such finds of glass artefacts at such an early date are rare but not unknown if one refers back to the comparative material from Balambat Period III, which has a date of between the beginning and first quarter of the first millennium BC (Dani 1967: 239; Vogelsang 1988: 103).

10.6.1 Barrel beads

Special find no: 28 Trench: Ch. III Context: 1
Period: VI Weight: 0.1g
Material: Glass Dimensions: 0.50 x 0.40cm Hole diam. N/A
Description: Two fragments of opaque green and white glass. Has exterior barrelled surface with no sign of hole exit.

Special find no: 37 Trench: Ch. VI Context: 37
Period: V Weight: <0.1g
Material: Glass Dimensions: 0.18 x 0.29cm Hole diam. 0.13cm
Description: Opaque black glass barrel shaped bead. Hole offset to one end.

Special find no: 69 Trench: Ch. VI Context: 7
Period: VI Weight: 0.3g
Material: Glass Dimensions: 1.05 x 0.55cm Hole diam. 0.14cm
Description: Half(through the axis) opaque brown barrel bead with etched white lines either side of the equator, each in the middle of the half.
(Colour Plate 1.4)
(Figure 10.1)

Special find no: 337 Trench: Ch. III Context: 1
Period: VI Weight: 0.1g
Material: Glass Dimensions: 0.53 x 0.62cm Hole diam. 0.21cm
Description: Half (through the axis) opaque pale green barrel shaped bead.

Special find no: 363 Trench: Ch. VI Context: 38
Period: V Weight: 0.8g
Material: Glass Dimensions: 1.17 x 0.63cm Hole diam. 0.25cm
Description: Black barrel bead, which tapers slightly from the middle. Ends chamfered in the same direction.

Special find no: 369 Trench: Ch. VI Context: 58
Period: V Weight: 0.6g
Material: Glass Dimensions: 0.89 x 0.77cm Hole diam. 0.21cm
Description: Half (across the axis) opaque yellow and black barrel bead with scalloped beading. Hole doesn't pass all the way through.
(Figure 10.1)

Special find no: 402 Trench: Ch. III Context: 1
Period: VI Weight: 0.1g
Material: Glass Dimensions: 0.42 x 0.37cm Hole diam. 0.14cm
Description: Dark blue barrel shaped bead with wear on the barrelled surface.

Finds No. 433 Trench: Ch. III Context: 1
Period: VI Weight: 0.2g
Material: Glass Dimensions: 0.74 x 0.76cm Hole diam. 0.15cm
Description: Half (through the axis) black convex barrel shaped bead with a white inscribed line midway between top and bottom of the bead.

Special find no: 539 Trench: Ch. VI Context: 7
Period: VI Weight: 0.1g
Material: Glass Dimensions: 0.40 x 0.64cm Hole diam. 0.22cm
Description: Half (through the axis) black barrel shaped bead with inscribed white line running around the centre.

Special find no: 739 Trench: Ch. VIII Context: 1003
Period: V Weight: 1.4g
Material: Glass Dimensions: 1.59 x 0.72cm Hole diam. 0.16cm
Description: clear barrel bead. Widest part of bead offset toward one end.

10.6.2 Conical beads

Special find no: 1055 Trench: Ch. IX Context: 1067
Period: V Weight: 0.3g
Material: Glass Dimensions: 0.67 x 0.78cm Hole diam. 0.15cm
Description: Conical shaped bead with opaque pale green and green swirl pattern. Part of base missing.

Special find no: 1131 Trench: Ch. VIII Context: 1091
Period: II Weight: <0.1g
Material: Glass Dimensions: 0.27 x 0.36cm Hole diam. N/A
Description: Three fragments of irregular white conical shaped bead?

10.6.3 Spherical disc beads

Special find no: 102 Trench: Ch. III Context: 1
Period: VI Weight: 0.1g
Material: Glass Dimensions: 0.51 x 0.67cm Hole diam. 0.22cm
Description: Dark brown spherical disc bead with wide inscribed white line running with the axis. Surface is pitted and scratched. Hole wider in diameter at one end than the other.
(Figure 10.1)

Special find no: 223 Trench: Ch. VI Context: 42
Period: V Weight: 0.3g
Material: Glass Dimensions: 0.54 x 0.71cm Hole diam. 0.23cm
Description: Opaque black and white swirled beaded spherical disc shaped bead with flattened ends.

Special find no: 250 Trench: Ch. III Context: 1
Period: VI Weight: 0.1g
Material: Glass Dimensions: 0.50 x 0.62cm Hole diam. 0.16cm
Description: Half (through the axis) yellow spherical disc bead. Inscribed lines running around the bead near the holes.

Special find no: 292 Trench: Ch. VI Context: 57
Period: II Weight: <0.1g
Material: Glass Dimensions: 0.24 x 0.32cm Hole diam. 0.10cm
Description: Translucent red spherical disc shaped bead.

Special find no: 452 Trench: Ch. III Context: 1
Period: VI Weight: 0.2g
Material: Glass Dimensions: 0.36 x 0.62cm Hole diam. 0.20cm
Description: Translucent greyish green spherical disc shaped bead with flattened ends. Possibly been polished to remove burring.
(Figure 10.1)

Special find no: 471 Trench: Ch. III Context: 1
Period: VI Weight: 0.3g
Material: Glass Dimensions: 0.50 x 0.75cm Hole diam. 0.22cm
Description: Crudely formed black spherical disc bead. Off-centre hole tapers down to 0.22cm. This end has a slight burr on it.

Special find no: 554 Trench: Ch. VI Context: 7
Period: VI Weight: 0.2g
Material: Glass Dimensions: 0.27 x 0.68cm Hole diam. 0.21cm
Description: Dark orange irregular spherical disc bead, ovoid in cross section, with offset hole.
(Figure 10.1)

Special find no: 560 Trench: Ch. III Context: 1
Period: VI Weight: <0.1g
Material: Glass Dimensions: 0.45 x 0.61cm Hole diam. 0.15cm
Description: Half (through the axis) of greyish yellow spherical disc glass bead with inscribed lines running with the axis.

Special find no: 1058 Trench: Ch. IX Context: 1035
Period: VI Weight: 0.4g
Material: Glass Dimensions: 0.72 x 0.65cm Hole diam. 0.17cm
Description: Dark red spherical disc bead. Drilled through centre.

Special find no: 1060 Trench: Ch. IX Context: 1035
Period: VI Weight: <0.1g
Material: Glass Dimensions: 0.27X 0.39cm Hole diam. 0.11cm
Description: Opaque white spherical disc bead.
(Figure 10.1)

10.6.4 Disc beads

Special find no: 856 Trench: Ch. VIII Context: 1018
Period: V Weight: 0.1g
Material: Glass Dimensions: 0.20 x 0.42cm Hole diam. 0.20cm
Description: Flat orange disc bead with offset hole.

10.6.5 Multi-faceted beads

Special find no: 693 Trench: Ch. VIII Context: 1003
Period: V Weight: 0.6g
Material: Glass Dimensions: 0.69 x 0.83cm Hole diam. 0.19cm
Description: Polyhedral (24 sides) bead, opaque dark green with clear bead running through it. Hexagonal when viewed from side.

10.6.6 Unseparated beads

Special find no: 19 Trench: Ch. III Context: 1
Period: VI Weight: 0.2g
Material: Glass Dimensions: 0.67 x 0.56cm Hole diam. 0.15cm
Description: Half (through centre) greyish yellow rounded bead. Prominent burr at one end. Inscribed lines running with the axis.

Special find no: 63 Trench: Ch. VI Context: 6
Period: VI Weight: 0.4g
Material: Glass Dimensions: 0.96 x 0.42cm Hole diam. 0.19cm
Description: Half (through the axis) black bead. One inscribed line running with the axis. In centre on each half, there is a slight increase in size of the drill hole, which is spherical in shape.
(Figure 10.1)

Special find no: 149 Trench: Ch. III Context: 1
Period: VI Weight: 0.2g
Material: Glass Dimensions: 0.63 x 0.59cm Hole diam. 0.15cm
Description: Translucent greyish yellow lower portion of bead encrusted with a white film, with inscribed lines running with the axis. Slight burr at one end, and larger burr at the other. Possibly due to the breaking off of another similar half.

Special find no: 225 Trench: Ch. VI Context: 7
Period: VI Weight: 0.2g
Material: Glass Dimensions: 0.64 x 0.76cm Hole diam. 0.35cm
Description: Half (through the axis) of one end of bead. Burr at one end runs round the hole, possibly top portion missing.

Special find no: 391 Trench: Ch. VI Context: 58
Period: V Weight: 0.1g
Material: Glass Dimensions: 0.51 x 0.49cm Hole diam. 0.20cm
Description: Opaque turquoise blue bead, broken just below rib in middle. Slight burr on one side.
(Figure 10.1)

Special find no: 630 Trench: Ch. VIII Context: 1001
Period: V Weight: 0.1g
Material: Glass Dimensions: 0.67 x 0.34cm Hole diam. 0.16cm
Description: Translucent burgundy coloured unseparated bead.
(Figure 10.1)

10.6.7 Spherical beads

Special find no: 27 Trench: Ch. III Context: 1
Period: VI Weight: 0.3g
Material: Glass Dimensions: 0.64 x 0.66cm Hole diam. 0.24cm
Description: Dark yellow spherical bead with inscribed lines running with the axis. Burrs occur at both ends, possibly lug collars?
(Figure 10.1)

Special find no: 47 Trench: Ch. III Context: 1
Period: VI Weight: 0.2g
Material: Glass Dimensions: 0.54 x 1.57cm Hole diam. 0.14cm
Description: White encrusted spherical glass bead. Slightly burred at both ends.

Special find no: 276 Trench: Ch. III Context: 1
Period: VI Weight: 0.5g
Material: Glass Dimensions: 0.70 x 0.75cm Hole diam. 0.17cm
Description: Black spherical bead with some surface pitting. Burred at one end. Slightly rounded holes.

Special find no: 563 Trench: Ch. III Context: 1
Period: VI Weight: 2.0g
Material: Glass Dimensions: 1.72 x 1.58cm Hole diam. N/A
Description: Half (through the axis) of pale green spherical bead. Outer coated in thin white encrusted layer.

Special find no: 657 Trench: Ch. VIII Context: 1006
Period: V Weight: 0.3g
Material: Glass Dimensions: 0.68 x 0.88cm Hole diam. 0.33cm
Description: Half (through the axis) spherical glass bead with pale white and blue linear design across the axis.

Special find no: 720 Trench: Ch. VIII Context: 1011
Period: V Weight: <0.1g
Material: Glass Dimensions: 0.27 x 0.41cm Hole diam. 0.18cm
Description: Opaque white and turquoise spherical bead which is ovular in section.

Special find no: 835 Trench: Ch. VIII Context: 1017
Period: V Weight: 0.2g
Material: Glass Dimensions: 0.46 x 0.55cm Hole diam. 0.18cm
Description: Opaque with spherical bead with burr at one end and offset hole . Wear on main side.

10.6.8 Melted and badly damaged beads

Special find no: 255 Trench: Ch. III Context: 1
Period: VI Weight: 1.0g
Material: Glass Dimensions: 0.89 x 0.99cm Hole diam. 0.25cm
Description: Black bead. This bead has been melted. Original form is unclear.

Special find no: 631 Trench: Ch. VII Context: 1001
Period: V Weight: 0.2g
Material: Glass Dimensions: 0.69 x 0.57cm Hole diam. 0.18cm
Description: Fragment of pink glass. Possibly faceted square bead.

Special find no: 659 Trench: Ch. VIII Context: 1006
Period: V Weight: 1.9g
Material: Glass Dimensions: 1.08 x 1.30cm Hole diam. 0.37cm
Description: White, grey and black swirled bead. Bead has split into three pieces.

10.7 UNFORMED AND INGOT GLASS

A total of 22 examples of unformed glass were recovered from the excavations at the Bala Hisar of Charsadda, weighing a combined 39g. All were recovered from the badly disturbed levels of Period V and VI and probably represent a relatively late category of object. They range in size between 0.1 and 9.4g and probably suggest evidence for the small-scale recycling and re-working of glass on site. The presence of uncut barrel beads, discussed in Section 10.6.6, further strengths this suggestion. It is worth noting that Sir John Marshall recovered a hoard of 392 lenticular pieces for making glass beads, and three lumps of brilliant red opaque glass in crude state, probably for performing a similar function (Marshall 1951: 690).

Special find no: 4 Trench: Ch. III
Context: 1
Period: VI Weight: <0.1g
Description: Blue

Special find no: 35 Trench: Ch. III
Context: 1
Period: VI Weight: 6.2g
Description: Yellow/White

Special find no: 35 Trench: Ch. III
Context: 1
Period: VI Weight: 0.5g
Description: Dark blue

Special find no: 40 Trench: Ch. III
Context: 1
Period: VI Weight: 0.1g
Description: Dark blue

Special find no: 48 Trench: Ch. III
Context: 1
Period: VI Weight: 3.9g
Description: Dark green

Special find no: 108 Trench: Ch. III
Context: 1
Period: VI Weight: 6.4g
Description: Yellow/white

Special find no: 136 Trench: Ch. III
Context: 1
Period: VI Weight: 0.8g
Description: Black/dark blue

Special find no: 286 Trench: Ch. VI
Context: 6
Period: VI Weight: 0.2g
Description: Blue

Special find no: 329 Trench: Ch. III
Context: 1
Period: VI Weight: 2.3g
Description: Blue

Special find no: 360 Trench: Ch. III
Context: 1
Period: VI Weight: 2.0g
Description: Black/dark blue

Special find no: 387 Trench: 58
Context: 58
Period: V Weight: 0.4g
Description: Blue

Special find no: 393 Trench: Ch. III
Context: 1
Period: VI Weight: 1.5g
Description: Black/dark blue

Special find no: 419 Trench: Ch. III
Context: 1
Period: VI Weight: 0.8g
Description: Yellow/white

Special find no: 434 Trench: Ch. III
Context: 1
Period: VI Weight: 0.9g
Description: Black/dark blue

Special find no: 426 Trench: Ch. VI
Context: 58
Period: V Weight: 1.3g
Description: Dark blue

Special find no: 534 Trench Ch. VI
Context: 58
Period: V Weight: <0.1g
Description: Blue

Special find no: 537 Trench: Ch. VI
Context: 7
Period: VI Weight: 0.2g
Description: Black/dark blue

Special find no: 536 Trench: Ch. VI
Context: 7
Period: VI Weight: 0.2g
Description: Black/dark blue

Special find no: 561 Trench: Ch. III
Context: 1
Period: VI Weight: 0.2g
Description: Yellow

Special find no: 564 Trench: Ch. III
Context: 1
Period: VI Weight: 0.2g
Description: Blue

Special find no: 737 Trench: Ch. VIII
Context: 1012
Period: V Weight: 9.4g
Description: Light Green

Special find no: 846 Trench: Ch. VIII
Context: 1018
Period: V Weight: 1.1g
Description: Light Green

10.8 CONCLUSION

Only five of the 175 glass objects recovered from the excavations at the Bala Hisar of Charsadda came from in-situ archaeological levels (Table 10.1). These comprise three bangles and two beads (Sfs 292, 481, 493, 515 & 1131). In terms of periodisation, bangle Sf 493 was the only glass object recovered from Period III and has a date of between c. 770 and 410 BC. One barrel bead (Sf 292) and two bangle fragments (Sfs 481 & 515) were recovered from Period II with dates between c. 1270 and 900 BC, and white spherical bead (Sf 1131) is possibly the oldest glass object having been recovered from a context with dates of between c. 1310 and 1050 BC. As noted above, the presence of glass in such early contexts is rare but not unknown. For example, four glass bangles were recovered from Period III levels at Balambat in the Dir Valley (Dani 1967: 283). Dating to between the beginning and first quarter of the first millennium BC (Dani 1967: 239; Vogelsang 1988: 103), the presence of such evidence close to Charsadda is very supportive of glass finds in Charsadda Period II. Although Dani (1967) did not report finds of glass objects from Gandharan Grave sites, Antonini recorded the presence of objects of glass-paste (Silva Antonini 1964: 23) and Stacul the recovery of 'paste or faience' spacers and beads from Period IV of Bir-kot-ghwandai, dating to between 1700 and 1400 BC (Stacul 1987: 101). Undoubtedly rare, a glass pendant was also recovered from a tomb at Loebanr I in the Swat Valley (Stacul 1966: 58). Further south and slightly later, glass bangles were reported from the earliest occupation levels at the Bhir Mound, Taxila, in Sharif's Period I (1969: 39) and beads from Periods II onwards (Sharif 1969: 58) but the presence of glass at Hathial is still unclear. Additional examples, although somewhat further to the east, have been cited from contemporary levels associated with Painted Grey Ware at Hastinapura in the Ganges Valley (Lal 1955: 13). Therefore, whilst the presence of four examples of very early glass objects in Period II contexts at the Bala Hisar of Charsadda may be rare, there is no reason to doubt their provenance. Indeed, the equally rare appearance of similar examples in contemporary sites in the Swat, Dir and the Ganges Valleys suggests that glass was known but not yet a mass-produced product.

	PERIODS	II	III	IV	V	VI	Totals
Vessels	no.				3	10	13
	wt. (g)				*3*	*11.5*	*14.5*
Plain bangles	no.	2	1		26	36	65
	wt. (g)	*2*	*1.5*		*28.99*	*27.9*	*60.39*
Spiral bangles	no.				4		4
	wt. (g)				*5*		*5*
Inlaid and decorated bangles	no.				16	12	28
	wt. (g)				*13.5*	*12.5*	*26*
Rings	no.				1	1	2
	wt. (g)				*1.3*	*1.7*	*3*
Jewelry inserts	no.				1		1
	wt. (g)				*0.7*		*0.7*
Barrel beads	no.				4	6	10
	wt. (g)				*2.9*	*0.9*	*3.8*
Conical beads	no.	1			1		2
	wt. (g)	*0.1*			*0.3*		*0.4*
Spherical disc beads	no.	1			1	7	9
	wt. (g)	*0.1*			*0.3*	*1.3*	*1.7*
Disc bead	no.				1		1
	wt. (g)				*0.1*		*0.1*
Faceted beads	no.				1		1
	wt. (g)				*0.6*		*0.6*
Unseparated beads	no.				2	4	6
	wt. (g)				*0.2*	*1*	*1.2*
Spherical beads	no.				3	5	8
	wt. (g)				*0.6*	*3.2*	*3.8*
Melted and badly damaged beads	no.				2	1	3
	wt. (g)				*2.1*	*1*	*3.1*
Unformed and ingot glass	no.				5	17	22
	wt. (g)				*12.3*	*26.7*	*39*
Totals	no.	4	1		71	99	175
	wt. (g)	*2.2*	*1.5*		*71.89*	*87.7*	*163.29*

Table 10.1: Glass objects

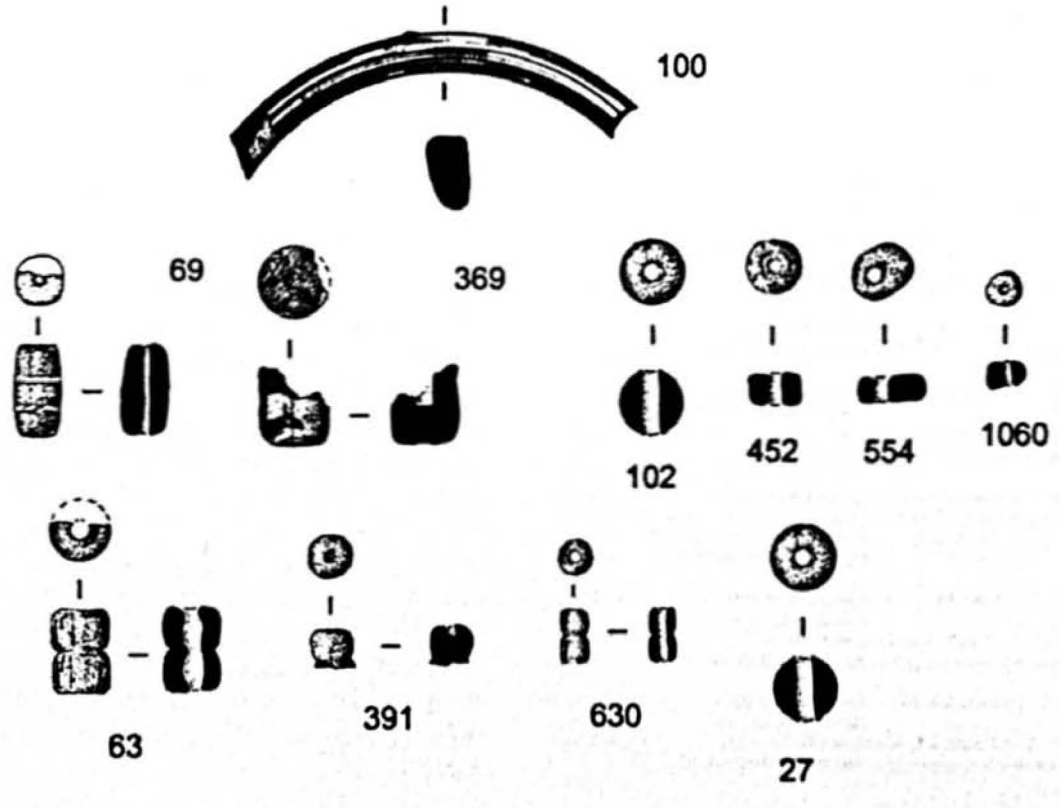

Figure 10.1: Glass objects (1:1)
Bangle fragment (Sf 100); barrel beads (Sfs 69 & 369); spherical disc beads (Sfs 102, 452, 554 & 1060); unseparated bead (Sfs 63, 391 & 630); spherical bead (Sf 27)

CHAPTER 11

THE STONE OBJECTS

Robin Coningham & Farooq Swati

11.1 INTRODUCTION

A total of 81 stone objects (4176.9g) were recovered from trenches Ch. III, VI and VIII/IX. These included sculpture fragments, vessels fragments, oil lamps, sickles, beads, bangles, mortars, pestles, whetstones, rods and unidentified objects (Table 11.1). Almost all these objects, 78, were recovered from the fills of robber trenches cut during site Period V or from erosion washes deposited during Period VI. The three remaining objects, Sfs 495, 990 & 1087, were recovered from 'in-situ' archaeological deposits. Beads represented the most numerous of this object categories with 55, followed by much smaller numbers for other objects. The latter included two sculptural fragments, four vessel fragments, one complete oil lamp, one 'single-holed sickle', one 'amulet', two jewellery inserts, one bangle fragment, two whetstones, two mortars, two pestles and one rod. In terms of weight, the most abundant stone raw material was granite (1429g), closely followed by schist (1399.8g) (Table 11.2). Other regional resources included marble and quartz, but more exotic materials were also recovered including agate, carnelian, garnet, lapis lazuli, steatite and turquoise indicating a broad range of trading contacts to the north and south as discussed in Section 2.4. We have also included within this chapter a unique object, Sf 1513, which is an artificial mixture of organic and inorganic materials. The comments on this object (Section 11.14) are only a summary of a longer scientific treatment in the journal *Archaeometry* (Ali *et al.* 2006). Finally, we have not attempted to quantify the vast number of cobbles littering the deposits at the Bala Hisar of Charsadda as they have not been altered in any way, only used as wall foundations as apparent within the exposed cliff-like section of the Bala Hisar. We also encountered such features within the final 'in-situ' phases of Period II in trench Ch. VIII (contexts 1100 & 1104) not to mention the two circular pits (contexts 1092 & 1071) which were filled entirely with a total of 1003 cobbles (see Section 7.3). Undoubtedly, these building materials were recovered from the banks of the nearby Swat and Kabul Rivers and tributaries, where people still sell them. This may explain why so much regionally available stone is deposited at the Bala Hisar of Charsadda, as such cobbles were easily sourced from the nearby river rather than being brought more distant rocky outcrops.

11.2 SCULPTURAL FRAGMENTS

Two fragments of schist sculpture were recovered from our excavations at the Bala Hisar of Charsadda, unfortunately both came from disturbed contexts. Neither object is diagnostic but they are likely to have come from the 2nd to 4th centuries AD 'Gandharan' levels in the upper part of the mound, as noted by both Sir Mortimer Wheeler (1962: 22) and Sir John Marshall (1904: 152).

Special find no: 114 Trench: Ch. III Context: 1
Period: VI Weight: 50.5g
Description: Dark grey/black schist; carved fragment with free-standing semi-circular rosette.
Material: Schist
Dimensions: 2.6 x 7.5 x 3.3cm
(Plate 11.1)
(Figure 11.1)

Special find no: 355 Trench: Ch. VI Context: 38
Period: V Weight: 340.0g
Description: Dark grey/black schist; carved fragment including decorative border of rosettes.
Material: Schist
Dimensions: 5.3 x 10.8 x 4.7cm
(Plate 11.1)
(Figure 11.1)

11.3 VESSELS

Four fragments of stone vessels were also recovered, three of schist (Sfs 112, 164 & 189) and one of steatite (Sf 135). Sfs 112 & 135 were recovered from the uppermost levels of the site and Sfs 164 & 189 from the fills of robber pits of Period V. Sf 135 is part of a shallow undecorated steatite bowl with a thickness of over 2cm and its plainness is different from the decorated steatite variants at Shaikhan Dheri (Dani 1966: 117). Sf 164 is also undecorated; it has a rough/damaged exterior and smooth interior with a straight wall and a short rim or ridge, but its exact form is unclear; it may be a fragment from a lamp or a toilet tray. In contrast, fragmentary schist artefact, Sf 112, is deeply carved on its exterior with a decoration of lotus petals; the interior is plain and smooth. Part of a curved vessel, it may have been part of a toilet casket (Marshall 1951: Plate 141, nos. 99b, 99c) or even a lamp (Marshall 1951: Plate 141, no. 112). Fragment Sf 189 also appears to be part of a schist vessel, probably one with a very narrow neck and mouth, perhaps a bottle or vase. Its mouth is thickened and undecorated on the exterior and has analogies with the narrow-necked lathe-turned vase from Dharmarajika (Marshall 1951: Plate 52).

Special find no: 112 Trench: Ch. VI Context: 6
Period: VI Weight: 52g
Description: Grey schist; fragment of vessel decorated with lotus petals on exterior, smooth interior wall.
Material: Schist
Dimensions: 1.9 x 6.2 x .95cm
(Plate 11.1)
(Figure 11.1)

Special find no: 135 Trench: Ch. VIII Context: 7
Period: VI Weight: 340.0g
Description: Reddish-grey steatite; three joining fragments of undecorated but polished shallow bowl.

Material: **Steatite**
Dimensions: **2.1 x 10.5 x 8.2cm**

Special find no: **164** Trench: **Ch. VI** Context: **35**
Period: **V** Weight: **23.0g**
Description: **Grey schist; fragment of vessel with rough/damaged exterior, no lip but smooth straight walled interior with single interior ridge perpendicular to rim.**
Material: **Schist**
Dimensions: **2.1 x 4.3 x 2.8cm**

Special find no: **189** Trench: **Ch. VI** Context: **42**
Period: **V** Weight: **34.0g**
Description: **Grey schist; polished fragment of vessel with narrow mouth (bottle?).**
Material: **Schist**
Dimensions: **2.7 x 4.1 x 2.2cm**
(Plate 11.1)

11.4 LAMPS

A single stone lamp was recovered from the robber pits of Period V, redeposited from earlier levels. It has an undecorated exterior and plain interior carved in the shape of a leaf or heart. It has been interpreted as an oil lamp rather than a vessel on account of its similarities with Marshall's category of stone leaf or heart-shaped lamps, with open reservoirs, which are not dated before the 2nd century AD (1951: 500). Other lamps of this design have also been reported from Shaikhan Dheri, but they were manufactured from schist (Dani 1966: 115).

Special find no: **860** Trench: **Ch. VIII** Context: **1001**
Period: **V** Weight: **580.0g**
Description: **Grey steatite; carved lamp with an exterior of rounded triangular shape and leaf- or heart-shaped interior. At apex on rim there is a slight notch with no signs of burning.**
Material: **Steatite**
Dimensions: **2.1 x 10.5 x 8.2cm**
(Plate 11.2)
(Figure 11.2)

11.5 'SINGLE-HOLED SICKLE'

Sf 495 was recovered from the fill of ditch cut 55, a feature associated with Period III and dated to between the 5th and 8th centuries BC. It is a rectangular schist object with a small hole pierced at one end and has a wedge-shaped profile with a rough reverse and highly polished obverse. Sf 495 is very similar to Stacul's ground stone category of 'rectangular holed sickles' as recovered from the site of Kalako-deray in Swat (1993: 75). Stacul has suggested that such items link sites in the Valley of Swat (Bir-Kot, Loebanr 3 and Kalako-deray) with others in the Kashmir Valley and communities further to the north and east, and that they may have been used for multiple functions such as 'weeding, skinning, scraping and harvesting' (Stacul 1994a: 710). Sf 495 is the first such sickle to have been recovered in the Vale of Peshawar, further linking Charsadda with the northern valleys, but as Stacul's examples were found in Ghalegay Period IV (1700–1400 BC) (1994: 708), Sf 495 was probably redeposited from earlier levels at the Bala Hisar. It should be noted that a very similar object was recovered from Dani's excavations at Shaikhan Dheri but diagnosed a 'whetstone and sharpener' (Dani 1966: 114).

Special find no: **495** Trench: **Ch. VI** Context: **66**
Period: **III** Weight: **30.0g**
Description: **Grey/black schist; rectangular in shape and pierced at one end, with a rough (obverse) surface and a polished (reverse) side which has two deep striations running lengthwise.**
Material: **Schist**
Dimensions: **2.4 x 7.7 x 1.2cm**
(Plate 11.2)
(Figure 11.2)

11.6 AMULET/PENDANT

Circular schist artefact Sf 881 was recovered from one of the robber pits of site Period V. The object has one smooth undecorated side and one highly decorated side, the latter having 18 shallow depressions, each surrounded by three concentric rings. There is a tab or handle at one end, now broken, which has evidence of a piercing. Sf 881 is unique and its function is not entirely clear, but we would suggest that it was used as an amulet hung from its pierced tab. We have been unable to find very close regional analogies but it should be noted that the concentric ring decoration was also used on schist bead Sf 688 from Charsadda as well as on bone objects from Bir-kot-ghwandai (Stacul 1987: Pl XXXVI). Although the latter date to between 1700–1400 BC, the design is extremely long lived and it also occurs on bone and ivory objects from Sirkap (Marshall 1951: Plate 200). In terms of function and shape, it shares some similarities with the circular metal pendant from the Swat cemetery of Katelai (Silvi Antonini & Stacul 1972: 44, Fig. 27 no. e), which is attributed to Phase III of the Swat Graveyards by Vindogradova (2001: Fig. 8 no. 45).

Special find no: **881** Trench: **Ch. VIII** Context: **1018**
Period: **V** Weight: **97.8g**
Description: **Green/grey schist; disk with one smooth flat undecorated side and one convex side decorated with a pattern of ten circles made of three concentric circles; the circles are placed evenly spaced around the edge, then in an inner ring of six also evenly spaced, and a single motif in the centre of the surface; at the extreme edge of the convex side there are numerous inscribed lines (+/- 0.5cm) in length radiating outward. A small pierced tab/handle is located at the edge with the same circle motif .**
Material: **Green/grey schist**
Dimensions: **1.0 x 9.3 x 8.2**
(Colour Plate 1.3)
(Plate 11.2)
(Figure 11.3)

11.7 JEWELLERY INSERTS

Two stone disks were recovered the fills of robber pits, of lapis lazuli (Sf 697) and etched carnelian (Sf 872). Sf 697 is a thin square of lapis lazuli with rounded and bevelled edges, sharing the same characteristics as those encountered by Marshall at the Bhir Mound (1951: 505). Sf 872 is notably thicker but as it is not drilled, it is unlikely to be a bead.

Special find no: **697** Trench: **Ch. VIII** Context: **1009**
Period: **V** Weight: **0.9g**
Description: **Blue flat squared oval lapis with rounded and bevelled edges.**
Material: **Lapis lazuli**
Dimensions: **1.37 x 0.95 x 0.32cm**
(Colour Plate 1.4)

Special finds no. **872** Trench: **Ch. VIII** Context: **1020**
Period: **V** Weight: **0.5g**
Description: **Orange carnelian of trapezoidal shape with etched triangles on both sides.**
Material: **Carnelian**
Dimensions: **0.73 x 0.40 x 1.15cm**
(Colour Plate 1.4)

11.8 BANGLES

A single incomplete schist bangle fragment was recovered from the robber pits of Period V. Sf 418 has a D-shaped cross section, but its presence within the sequence is rare as no schist bangles have been recovered from either Taxila or Shaikhan Dheri.

Special find no: **418** Trench **VI** Context: **58**
Period: **V** Weight: **0.3g**
Description: **Incomplete bangle of black schist. Squared D cross-section.**
Material: **Schist**
Dimensions **Fragment survives; N/A diameter, 0.35cm wide, 0.30cm thick.**

11.9 BEADS

As noted above, beads represent the most numerous category of special find from the Bala Hisar with a total number of 55 (Table 11.3). This section has been divided by material and then by bead form, although general trends will also be discussed. Beads were manufactured from

nine raw materials: agate, carnelian, garnet, lapis lazuli, marble, quartz, schist, steatite and turquoise (Table 11.4). The highest weight was of schist beads, but the most abundant material, in terms of numbers, was carnelian, followed by lapis lazuli and agate. Further to Section 2.4, in terms of the distribution of the raw materials, carnelian is mainly sourced in western India although agate and banded agates are found along the eastern edge of the Indo-Iranian plateau, the latter pattern is similar to the distribution of steatite, although it is also found along the Makkran coast and in the upper reaches of the Indus and its tributaries (Kenoyer 1988: 92–93). Lapis lazuli has sources in Badakhshan in Afghanistan as well as within the Chagai hills of Baluchistan (ibid.), garnet is found in Rajasthan (Krishnan 1982: 159) and turquoise in Central Asia. Marble, quartz and schist are all, however, available locally within the ranges surrounding the Vale of Peshawar and its northern valleys as well as within the cobbles littering the banks of the Vale's rivers. Our collection of 55 beads belonged to no more than ten distinct shapes, with spherical and barrel beads counting for more than half, and the remainder including beehive, disc, drop, hexagonal, notched barrel, squashed spheres and square spacer (Table 11.3). As none of the 55 beads were recovered from undisturbed contexts, it is difficult to make chronological comments but the presence of two schist beads (Sfs 688 & 761) in a beehive form is significant. Bead Sf 688 is made from black painted dark grey medium grained schist and has a decoration of six double (concentric) circles evenly spaced around the piercing on the base. On the convex side, nine double circles are evenly spaced around the piercing with a line around the centre with alternating angled lines in groups of three. Bead Sf 761 is also of medium grained schist and has a repeated pattern of obliquely inscribed lines following the axis with converging angular lines on either side. Whilst the form is shared with terracotta bead Sf 1051, which was recovered from levels dating to between c. 1310 and 1040 BC, the decoration of both is reminiscent of a number of the biconnical terracotta beads, such as Sf 326, recovered from levels dating to between c. 1270 and 930 BC (see Section 12.4). It is worth noting that similar schist examples were recovered from Period VII layers at Kalako-deray, although Stacul identified them as spindle-whorls rather than beads (Stacul 1995: 122).

11.9.1 Agate beads

11.9.1.1 Barrel beads

Special find no: 341 Trench: Ch. III Context: 1
Period: VI Weight: 0.1g
Material: Agate Dimensions: 0.66 x 0.53cm Hole Diam: 0.12cm
Description: Half (along the axis) of an opaque black, grey, white and clear banded barrel-shaped with bands across the axis.

Special find no: 364 Trench: Ch. VI Context: 38
Period: V Weight: 0.1g
Material: Agate Dimensions: 0.49 x 0.44cm Hole Diam: 0.15cm
Description: Opaque black and white, barrel-shaped bead with bands across axis and incomplete piercing.

11.9.1.2 Spherical beads

Special find no: 18 Trench: Ch. III Context: 1
Period: VI Weight: 0.3g
Material: Agate Dimensions: 0.57 x 0.59cm Hole Diam: 0.14cm
Description: Opaque pink and white banded spherical bead with inscribed line filled with black paste around the centre across the axis.

Special find no: 21 Trench: Ch. III Context: 1
Period: VI Weight: 2.0g
Material: Agate Dimensions: 1.10 x 1.17cm Hole Diam: 0.22cm
Description: Opaque orange and dark orange banded spherical bead with bands across the axis.
(Colour Plate 1.4)

Special find no: 61 Trench: Ch. VI Context: 6
Period: VI Weight: 0.6g
Material: Agate Dimensions: 0.70 x 078cm Hole Diam: 0.18cm
Description: Orange and brown opaque banded spherical bead with bands at angle to axis.
(Colour Plate 1.4)

Special find no: 146 Trench: Ch. VI Context: 40
Period: V Weight: 0.4g
Material: Agate Dimensions: 0.57 x 0.62cm Hole Diam: 0.14cm
Description: Clear grey and opaque black banded spherical bead with white lines at interface of the two bands all running across the axis.
(Figure 11.4)

Special find no: 445 Trench: Ch. III Context: 1
Period: VI Weight: 0.8g
Material: Agate Dimensions: 0.81 x 0.88cm Hole Diam: 0.19cm
Description: Opaque brown and orange banded bead with rough and chipped surface. Possibly in preparation for polishing.

Special find no: 665 Trench: Ch. VIII Context: 1003
Period: V Weight: 1.8g
Material: Agate Dimensions: 1.55 x 0.65cm Hole Diam: 0.55cm
Description: Opaque red, pink and white banded linear spherical bead with bands at an angle to the axis.

11.9.1.3 Square spacer beads

Special find no: 939 Trench: Ch. IX Context: 1048
Period: V Weight: 0.3g
Material: Agate Dimensions: 0.38 x 0.59cm Hole Diam: 0.18cm
Description: Translucent red square tubular shaped bead, pierced on the axis between diagonals.

11.9.2 Carnelian beads

11.9.2.1 Barrel beads

Special find no: 9 Trench: Ch. III Context: 1
Period: VI Weight: 0.2g
Material: Carnelian Dimensions: 0.73 x 0.41cm Hole Diam: 0.10cm
Description: Barrel bead without hole; orange in colour.
(Colour Plate 1.4)

Special find no: 256 Trench: Ch. III Context: 1
Period: VI Weight: 0.1g
Material: Carnelian Dimensions: 0.25 x 0.28cm Hole Diam: 0.12cm
Description: Dark orange truncated barrel bead.

Special find no: 342 Trench: Ch. III Context: 1
Period: VI Weight: 0.3g
Material: Carnelian Dimensions: 0.86 x 0.36cm Hole Diam: 0.10cm
Description: Irregular orange barrel bead with linear striations following the length of the axis.
(Figure 11.4)

Special find no: 374 Trench: Ch. III Context: 1
Period: VI Weight: 0.4g
Material: Carnelian Dimensions: 1.17 x 0.47cm Hole Diam: 0.17cm
Description: Complete tapered barrel with a central incised line across the axis filled with white.
(Figure 11.4)

Special find no: 406 Trench: Ch. III Context: 1
Period: VI Weight: 0.1g
Material: Carnelian Dimensions: 0.55 x 0.36cm Hole Diam: 0.10cm
Description: Barrel bead, roughly wedge shaped in cross-section.
(Colour Plate 1.4)

Special find no: 450 Trench: Ch. VI Context: 58
Period: V Weight: 0.1g
Material: Carnelian Dimensions: 0.52 x 0.34cm Hole Diam: 0.12cm
Description: Barrel shaped bead pierced through centre.
(Colour Plate 1.4)

Special find no: 562 Trench: Ch. III Context: 1
Period: VI Weight: 0.1g
Material: Carnelian Dimensions: 0.44 x 0.38cm Hole Diam: 0.12cm
Description: Barrel bead, roughly triangular in cross-section.
(Colour Plate 1.4)

Special find no: 974 Trench: Ch. IX Context: 1035
Period: VI Weight: 0.1g
Material: Carnelian Dimensions: 0.65 x 0.37cm Hole Diam: 0.10cm
Description: Barrel bead, triangular in cross-section.

Special find no: 975 Trench: Ch. IX Context: 1035
Period: VI Weight: 0.1g
Material: Carnelian Dimensions: 0.57 x 0.32cm Hole Diam: 0.09cm

Description: **Barrel shaped bead, pierced through the long axis.**
(Colour Plate 1.4)

11.9.2.2 Disc beads

Special find no: **34** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.1g**
Material: **Carnelian** Dimensions: **0.72 x 0.24cm** Hole Diam: **0.14cm**
Description: **Orange and yellow banded flat circular bead with bands running across the axis.**
(Colour Plate 1.4)

Special find no: **86** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.1g**
Material: **Carnelian** Dimensions: **0.22 x 0.39cm** Hole Diam: **0.14cm**
Description: **Dark orange flat circular bead with counter sunk hole at one end of axis.**
(Colour Plate 1.4)

Special find no: **87** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.6g**
Material: **Carnelian** Dimensions: **0.92 x 0.42cm** Hole Diam: **0.12cm**
Description: **Orange and red banded flat circular bead with axis across the diameter.**
(Figure 11.4)

Special find no: **150** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.1g**
Material: **Carnelian** Dimensions: **0.33 x 0.55cm** Hole Diam: **0.10cm**
Description: **Flat circular bead.**

Special find no: **1135** Trench: **Ch. VIII** Context: **1010**
Period: **V** Weight: **>0.1g**
Material: **Carnelian** Dimensions: **0.18 x 0.46cm** Hole Diam: **0.12cm**
Description: **Flat circular bead with counter sunk piercing on both sides.**

11.9.2.3 Drop-shaped beads

Special find no: **536** Trench: **Ch. VI** Context: **7**
Period: **VI** Weight: **0.2g**
Material: **Carnelian** Dimensions: **0.15 x 0.36cm** Hole Diam: **0.11cm**
Description: **Elongated drop-shaped bead pierced across at apex.**
(Figure 11.4)

11.9.2.4 Square spacers

Special find no: **26** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.1g**
Material: **Carnelian** Dimensions: **0.48 x 0.44cm** Hole Diam: **0.11cm**
Description: **Tabular terminal profile. Centrally pierced and complete in form.**

Special find no: **307** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.4g**
Material: **Carnelian** Dimensions: **0.96 x 1.02cm** Hole Diam: **0.10cm**
Description: **Square tabular shaped bead pierced on the axis between diagonals.**
(Figure 11.4)

11.9.2.5 Spherical beads

Special find no: **58** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.3g**
Material: **Carnelian** Dimensions: **0.48 x 0.59cm** Hole Diam: **0.14cm**
Description: **Orange and red banded spherical bead with bands running at angle to the axis.**
(Colour Plate 1.4)

Special find no: **401** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.2g**
Material: **Carnelian** Dimensions: **0.50 x 0.31cm** Hole Diam: **0.08cm**
Description: **Spherical shaped orange/red bead.**
(Colour Plate 1.4)

Special find no: **441** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.2g**
Material: **Carnelian** Dimensions: **0.47 x 0.55cm** Hole Diam: **0.15cm**
Description: **Spherical shaped red bead.**

Special find no: 1305 Trench: **Ch.** III Context: **1**
Period: **VI** Weight: **0.6g**
Material: **Carnelian** Dimensions: **0.75 x 0.85cm** Hole Diam: **0.20cm**
Description: **Orange spherical bead.**
(Figure 11.4)

11.9.3 Steatite beads

11.9.3.1 Barrel beads

Special find no: **535** Trench: **Ch. VI** Context: **7**
Period: **VI** Weight: **1.1g**
Material: **Steatite** Dimensions: **0.89 x 1.03cm** Hole Diam: **0.18cm**
Description: **Light grey truncated barrel bead.**

11.9.3.2 Spherical beads

Special find no: **304** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.3g**
Material: **Steatite** Dimensions: **0.48 x 0.65cm** Hole Diam: **0.18cm**
Description: **Light grey spherical shaped bead.**

Special find no: **1061** Trench: **Ch. IX** Context: **1035**
Period: **VI** Weight: **0.6g**
Material: **Steatite** Dimensions: **0.76 x 0.77cm** Hole Diam: **0.08cm**
Description: **Light grey bead of rounded/circular shape, but appears triangular in shape when viewed from end, with off centre pierce.**

11.9.4 Garnet

11.9.4.1 Spherical beads

Special find no: **647** Trench: **Ch. VIII** Context: **1006**
Period: **V** Weight: **0.3g**
Material: **Garnet** Dimensions: **0.60 x 0. 65cm** Hole Diam: **0.19cm**
Description: **Dark red/brown spherical bead.**
(Figure 11.4)

11.9.4.2 Squashed spherical beads

Special find no: **50** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.2g**
Material: **Garnet** Dimensions: **0.36 x 0. 5cm** Hole Diam: **0.15cm**
Description: **Dark red/brown flat squared circular bead.**

11.9.5 Lapis lazuli beads

11.9.5.1 Barrel beads

Special find no: **103** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.3g**
Material: **Lapis lazuli** Dimensions: **0.58 x 0.61cm** Hole Diam: **0.19cm**
Description: **Blue barrel-shaped bead.**
(Colour Plate 1.4)

Special find no: **321** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.1g**
Material: **Lapis lazuli** Dimensions: **0.40 x 0.40cm** Hole Diam: **0.15cm**
Description: **Blue barrel-shaped bead.**
(Colour Plate 1.4)

11.9.5.2 Hexagonal beads

Special find no: **175** Trench: **Ch. VI** Context: **7**
Period: **VI** Weight: **0.1g**
Material: **Lapis lazuli** Dimensions: **0.42 x 0.55cm** Hole Diam: **0.10cm**
Description: **Blue flattened hexagonal on axis bead.**

11.9.5.3 Spherical beads

Special find no: **59** Trench: **Ch. VI** Context: **6**
Period: **VI** Weight: **0.1g**
Material: **Lapis lazuli** Dimensions: **0.42 x 0.44cm** Hole Diam: **0.17cm**
Description: **Blue spherical-shaped bead.**
(Colour Plate 1.4)

Special find no: **60** Trench: **Ch. IX** Context: **6**
Period: **VI** Weight: **0.2g**
Material: **Lapis lazuli** Dimensions: **0.47 x 0.51cm** Hole Diam: **0.10cm**
Description: **Blue spherical-shaped bead slightly squared when viewed on axis.**
(Colour Plate 1.4)

Special find no: **671** Trench: **Ch. VII** Context: **1003**
Period: **V** Weight: **0.2g**
Material: **Lapis lazuli** Dimensions: **0.41 x 0.45cm** Hole Diam: **0.15cm**
Description: **Blue spherical-shaped bead.**
(Colour Plate 1.4)

Special find no: **1057** Trench: **Ch. IX** Context: **1035**
Period: **V** Weight: **0.2g**
Material: **Lapis lazuli** Dimensions: **0.47 x 0.50cm** Hole Diam: **0.13cm**
Description: **Blue spherical-shaped bead.**

Special find no: **1076** Trench: **Ch. IX** Context: **1035**
Period: **V** Weight: **>0.1g**
Material: **Lapis lazuli** Dimensions: **0.31 x 0.39cm** Hole Diam: **0.15cm**
Description: **Blue spherical-shaped bead.**
(Colour Plate 1.4)

11.9.5.4 Squashed spherical beads

Special find no: **718** Trench: **Ch. VII** Context: **1012**
Period: **V** Weight: **>0.1g**
Material: **Lapis lazuli** Dimensions: **0.37 x 0.34cm** Hole Diam: **0.13cm**
Description: **Blue flat circular disk-shaped bead.**
(Figure 11.4)

Special find no: **719** Trench: **Ch. VIII** Context: **1012**
Period: **V** Weight: **0.2g**
Material: **Lapis lazuli** Dimensions: **0.50 x 0.41cm** Hole Diam: **0.16cm**
Description: **Blue flat circular disk-shaped bead.**

Special find no: **1115** Trench: **Ch. IX** Context: **1035**
Period: **VI** Weight: **0.1g**
Material: **Lapis lazuli** Dimensions: **0.23 x 0.43cm** Hole Diam: **0.10cm**
Description: **Blue flat circular disk -shaped bead.**

11.9.6 Quartz beads

11.9.6.1 Hexagonal beads

Special find no: **214** Trench: **Ch. VI** Context: **1**
Period: **VI** Weight: **1.5g**
Material: **Quartz** Dimensions: **1.23 x 0.94cm** Hole Diam: **0.20cm**
Description: **Clear crystal hexagonal linear convex bead.**
(Figure 11.4)

Special Finds No. **260** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **1.8g**
Material: **Quartz** Dimensions: **1.37 x 0.94cm** Hole Diam: **0.14cm**
Description: **Seven-faceted opaque quartz bead, symmetrical in plane**

Special find no: **611** Trench: **Ch. VIII** Context: **1000**
Period: **V** Weight: **1.4g**
Material: **Quartz** Dimensions: **1.21 x 1.02cm** Hole Diam: **0.11cm**
Description: **Clear pale blue crystal; flattened linear squared hexagonal bead.**

11.9.7 Schist beads

11.9.7.1 Barrel beads

Special find no: **1056** Trench: **Ch. IX** Context: **1035**
Period: **VI** Weight: **0.3g**
Material: **Schist** Dimensions: **0.60 x 0. 48cm** Hole Diam: **0.12cm**
Description: **Linear fine grained dark grey schist of triangular shape when viewed from pierced end.**

11.9.7.2 Beehive-shaped beads

Special find no: **688** Trench: **Ch. VIII** Context: **1003**
Period: **V** Weight: **36.9g**
Material: **Schist** Dimensions: **2.17 x 3.33cm** Hole Diam: **0.99cm**
Description: **Black painted dark grey medium grained schist of beehive shape. Six double (concentric) circles are evenly spaced around the pierce on base. On convex side nine double circles evenly spaced around the pierce with inscribed line around centre with alternating angled lines in groups of three.**
(Colour Plate 1.3)
(Plate 11.3)
(Figure 11.5)

Special find no: **761** Trench: **Ch. VIII** Context: **1010**
Period: **V** Weight: **14.7g**
Material: **Schist** Dimensions: **2.19 x 3.16cm** Hole Diam: **1.22cm**
Description: **Beehive-shaped bead of medium grained schist with repeated pattern of obliquely inscribed lines following the axis with converging angular lines on either side.**
(Colour Plate 1.3)
(Figure 11.5)

11.9.8 Turquoise beads

11.9.8.1 Notched barrel beads

Special find no: **141** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.8g**
Material: **Turquoise** Dimensions: **0.81 x 1.00cm** Hole Diam: **0.22cm**
Description: **Opaque pale blue irregular notched barrel bead.**
(Figure 11.4)

11.9.9 Marble beads

11.9.9.1 Barrel beads

Special find no: **32** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.5g**
Material: **Marble** Dimensions: **0.67 x 0.68cm** Hole Diam: **0.14cm**
Description: **Opaque white marble barrel shaped bead with chamfered ends.**

11.9.9.2 Irregular beads

Special Finds No.: **873** Trench No.: **VIII** Context: **1019**
Period: **V** Weight: **9.3g**
Material: **Marble** Dimensions: **2.0 x 2.0 x 1.5cm** Hole Diam: **0.12cm**
Description: **irregular white marble bead.**

11.10 WHETSTONES

Two whetstones, or blade sharpeners, were recovered, one from Period II (Sf 990) and one from the mixed levels of Period V (Sf 1123). Although, we have termed this group 'whetstones', the exact function of this category of stone object is not entirely certain. Dani has termed such objects whetstones at Shaikhan Dheri (1966: 114), but it is possible that they had other purposes.

Special find no: **990** Trench: **Ch. VIII** Context: **1052**
Period: **II** Weight: **440.0g**
Description: **Grey/black schist; flat and rounded triangle in shape. It has smooth worn/polished vertical edges.**
Material: **Schist**
Dimensions: **2.5 x 10.1 x 8.8cm**
(Figure 11.6)

Special find no: **1123** Trench: **Ch. VIII** Context: **1015**
Period: **V** Weight: **280g**
Description: **Grey/black schist; fragment of flat squared stone with smooth vertical polished edge.**
Material: **Schist**
Dimensions: **2.1 x 10.5 x 8.2cm**

11.11 MORTARS

Two mortars were also recovered, Sfs 322 & 832, both from the fills of Period V robber pits. Both are manufactured from granite and similar objects have been interpreted as mortars for processing plants (Stacul 1987: 94). Such forms are widespread and although they first appear in the Swat Valley in Ghalegay Period IV, they are also found in Shaikhan Dheri (1966: 114). It is possible that such ground mortars are only a single processing stage away from becoming ringstones, that is, they will be ringstones once the two central concave depressions on either side finally meet. None of the grinding slabs and querns associated with the earlier forms of the Swat Valley sequence were recovered.

Special find no: **322** Trench: **Ch. VI** Context: **58**
Period: **V** Weight: **189.0g**
Description: **Light grey granite; rounded disk-shaped object, probably a mortar. Two central concave depressions are located on either side.**
Material: **Granite**
Dimensions: **2.4 x 6.2 x 6.3cm**

Special find no: **832** Trench: **Ch. VIII** Context: **1010**
Period: **V** Weight: **260.0g**
Description: **Light grey granite; rounded disk-shaped object, probably a mortar. Two central concave depressions are located on either side.**
Material: **Granite**
Dimensions: **3.4 x 6.3 x 6.3**
(Plate 11.3)
(Figure 11.7)

11.12 PESTLES

Two pestles were recovered from the robber pits of site Period V, although different in form from one another. Sf 861 has a well-known cylindrical form and similar objects have been recorded at Shaikhan Dheri (Dani 1966: 114). It is notable, however, that Stacul has suggested that ground stone balls were also utilised as pestles as illustrated by artefacts from Bir-kot-ghwandai (Stacul 1987: 217). This widened category thus includes ground ball Sf 1008.

Special find no: **861** Trench: **Ch. VIII** Context: **1020**
Period: **V** Weight: **100.0g**
Description: **Grey granite; cylindrical object with one end slightly tapered and rounded and the other flat and worn/polished.**
Material: **Granite**
Dimensions: **3.3 x 4.9 x 3.3**
(Plate 11.3)
(Figure 11.7)

Special find no: **1008** Trench: **Ch. IX** Context: **1053**
Period: **V** Weight: **200.0g**
Description: **Light grey/pink granite; spherical shaped object with rough surface.**
Material: **Granite**
Dimensions: **5.5 x 5.0 x 5.2**
(Plate 11.3)

11.13 RODS

A single steatite rod, Sf 669, was recovered from the robber pits of site Period V. Marshall identified similar objects of agate and chert as burnishers and polishers of small gold and silver objects but Sf 669 may have acted as a handle for a larger object such as the 'priestly sceptre' recovered from Shaikhan Dheri (Dani 1966: 117).

Special find no: 669 Trench: Ch. VIII Context: 1003
Period: V Weight: 18.7g
Description: Dark brown/black steatite; rod with irregular incision along shaft with a slight taper to one end.
Material: Steatite
Dimensions: 1.3 x 6.4 x 1.3cm
(Figure 11.7)

11.14 UNIDENTIFIED OBJECTS

This category comprises seven unidentified stone objects, one of marble (Sf 324), schist (Sf 394), diorite (Sf 438), quartz (Sf 540), two of steatite (Sfs 558 & 672) and an unidentified green stone (1087). All but Sf 1087 came from mixed contexts, either Period V or VI, and are of unclear function. In addition, there is a single unique object which comprises an artificial mixture of mineral, mainly barite, and flammable resinous organic material. This object, Sf 1513, was recovered from 'in-situ' context 80 at the base of ditch cut 55. Dating to Phase III, the object is a ball, which has sustained significant damage from ignition in a fire. The subject of a detailed scientific study (Ali *et al.* 2006), it is though to represent an incendiary missile.

Special find no: 324 Trench: Ch. VI Context: 58
Period: V Weight: 440.0g
Description: Light grey marble; flat rectangular shape with worn and rounded edges (along length) and shaped to fit hand. (Possibly a reused piece of marble.)
Material: Marble
Dimensions: 7.5 x 10.8 x 3.0

Special find no: 394 Trench: Ch. III Context: 1
Period: VI Weight: 0.3g
Description: Fragment of fine grained dark grey schist, broken at piercing.
Material: Schist
Dimensions: 0.83 x 0. 56cm Hole Diam: 0.13cm
(Figure 11.4)

Special find no: 438 Trench: Ch. VI Context: 64
Period: V Weight: 600.0g
Description: Light grey interior with red polished exterior; fragment with polished flat surface and curved edges to fracture line.
Material: Diorite
Dimensions: 4.8 x 8.2 x 10.7cm

Special find no.: 540 Trench No.: Ch. III Context: 1
Period: VI Weight: 22.0g
Description: Irregular fragment of iron stained white quartz; with no obvious signs of working.
Material: Quartz

Special find no.: 558 Trench No.: Ch. VI Context: 7
Period: VI Weight: 1.0g
Description: Fragment of worked stone - scars where flake removed.
Material: Steatite

Special find no: 672 Trench: Ch. VIII Context: 1003
Period: V Weight: 2.1g
Material: Steatite Dimensions: 1.43 x 1.43 x 0.59cm
Description: Light grey disk with smooth edge and rough sides. Counter?

Special find no: 1087 Trench: Ch. VIII Context: 1077
Period: II Weight: 13.3g
Description: Green stone of unknown type; polished semicircular flat shape with highly rounded edges.
Material: green stone of unknown type
Dimensions: 2.1 x 10.5 x 8.3cm

Special find no: 1513 Trench: Ch. VI Context: 80
Period: III Weight: 65.3g
Description: ball which has been subject to intense heat.
Material: artificial mixture of mineral (mostly barite) and flammable resinous organic material.
Dimensions: 5.27cm diameter
(Colour Plate 1.3)

11.15 CONCLUSION

As noted in Section 11.1, only three of our 81 stone objects were recovered from archaeologically undisturbed contexts, making wide-reaching conclusions difficult. It is of significance, however, that two of the three objects, representing 470g of the Period II and III total of 483.3g, were both made of schist (Table 11.2). This significance is twofold, resting on the form of Sf 495 as well as the apparent tradition of schist-working within the region. 'Single-holed sickle' Sf 495 firmly links the lower levels of the Bala Hisar of Charsadda with the cultural developments in the northern valleys, a link strengthened by the presence of decorated schist beehive-shaped beads or spindle-whorls. The presence of such an artefact at the Bala Hisar again stresses the settlement's links to the north because as Marshall has commented 'Schist...was not introduced at Taxila until after the advent of the Bactrian Greeks (c. 190 BC)' (Marshall 1951: 488). The distribution of these distinctive schist beehive-shaped objects is fairly restricted, with finds in the Vale of Peshawar at the settlements of Charsadda and Shaikhan Dheri (Dani 1966) as well as within the Swat Valley at the settlement of Kalako-deray (Stacul 1995) and in the Dir Valley at the cemetery of Timargarha (Dani 1967). It is interesting to note that although the same designs and forms were shared by those working in terracotta and stone, no debitage has been recovered from the trenches at the Bala Hisar of Charsadda. The absence of any flakes of semi-precious and local stone combined with the presence of only two incomplete beads (Sfs 364 & 445), despite sieving, strongly suggests that the stone artefacts recovered from Charsadda were manufactured elsewhere and brought into the settlement complete. For example, the general absence of carnelian bead blanks suggests that beads recovered were ground, drilled and polished elsewhere, a pattern very different from that found at a number of other Early Historic sites. At the city of Anuradhapura, for example, a total of 102 individual carnelian artefacts were recovered, of which only 35 were finished objects, the others being shaped bead blanks or debitage (Coningham 2006). It is interesting to note that apart from Sirkap deposit E, no debitage or artefacts associated with lapidary work were recorded at Taxila's three cities (Marshall 1951: 505) or during Dani's excavations at Shaikhan Dheri (Dani 1966). This pattern is not just restricted to the larger settlements of the Vale of Peshawar and the Taxila Valley as there have been no reports of evidence for semi-precious stone-working from the entire Swat Valley (Stacul 1987), the Dir Valley (Dani 1967) or the Chitral Valley. This pattern suggests that whatever role the settlement at Charsadda played, it did not host a lapidary quarter, unlike its eventual successor, the city of Peshawar.

	PERIODS	II	III	IV	V	VI	TOTALS
Sculptures	no.				1	1	2
	wt. (g)				*340*	*50.5*	*390.5*
Vessels	no.				2	2	4
	wt. (g)				*57*	*292*	*349*
Lamps	no.				1		1
	wt. (g)				*580*		*580*
Sickles	no.		1				1
	wt. (g)		*30*				*30*
Amulets	no.				1		1
	wt. (g)				*97.8*		*97.8*
Jewelry inserts	no.				2		2
	wt. (g)				*1.4*		*1.4*
Bangles	no.				*1*		1
	wt. (g)				*0.3*		*0.3*
Bead totals	no.				16	39	55
	wt. (g)				*65.4*	*16.1*	*81.5*
Whetstones	no.	1			1		2
	wt. (g)	*440*			*280*		*720*
Mortars	no.				2		2
	wt. (g)				*449*		*449*
Pestles	no.				2		2
	wt. (g)				*300*		*300*
Rods	no.				1		1
	wt. (g)				*18.7*		*18.7*
Unidentified objects	no.	1			3	3	7
	wt. (g)	*13.3*			*1122.1*	*23.3*	*1158.7*
TOTALS	no.	2	1		33	45	81
	wt. (g)	*453.3*	*30*		*3311.7*	*381.9*	*4176.9*

Table 11.1: Stone objects

	PERIODS	II	III	IV	V	VI	Totals
Agate	no.				4	5	9
	wt. (g)				*1.8*	*3.8*	*5.6*
Carnelian	no.				3	19	22
	wt. (g)				*0.7*	*4.3*	*5*
Garnet	no.				1	1	2
	wt. (g)				*0.3*	*0.2*	*0.5*
Granite	no.				*5*		5
	wt. (g)				*1429*		*1429*
Lapis Lazuli	no.				6	6	12
	wt. (g)				*1.7*	*0.9*	*2.6*
Marble	no.				*2*	1	3
	wt. (g)				*449.3*	*0.5*	*449.8*
Quartz	no.				*1*	*3*	4
	wt. (g)				*1.4*	*25.3*	*26.7*
Schist	no.	1	1		*8*	*4*	14
	wt. (g)	*440*	*30*		*826.7*	*103.1*	*1399.8*
Steatite	no.				*3*	*5*	*8*
	wt. (g)				*600.8*	*243*	*843.8*
Turquoise	no.					1	1
	wt. (g)					*0.8*	*0.8*
Undiagnostic	no.	1					1
greenstone	*wt. (g)*	*13.3*					13.3
Totals	no.	2	1		33	45	81
	wt. (g)	*453.3*	*30*		*3311.7*	*381.9*	*4176.9*

Table 11.2: Stone raw materials

	PERIODS	II	III	IV	V	VI	TOTALS
Barrel	no.				2	14	16
	wt. (g)				*0.2*	*3.8*	*4*
Beehive	no.				2		2
	wt. (g)				*51.6*		*51.6*
Disc	no.				1	4	5
	wt. (g)				*0.1*	*0.9*	*1*
Drop-shaped	no.					1	1
	wt. (g)					*0.2*	*0.2*
Hexagonal	no.				1	3	4
	wt. (g).				*1.4*	*3.4*	*4.8*
Notched barrel	no.					1	1
	wt. (g)					*0.8*	*0.8*
Spherical	no.				6	12	18
	wt. (g)				*2.2*	*6.2*	*8.4*
Squashed spherical	no.				*2*	*2*	4
	wt. (g)				*0.3*	*0.3*	*0.6*
Square spacers	no.				1	*2*	3
	wt. (g)				*0.3*	*0.5*	*0.8*
Irregular	no.				1		1
	wt. (g)				*9.3*		*9.3*
TOTALS	no.				16	39	55
	wt. (g)				*65.4*	*16.1*	*81.5*

Table 11.3: Stone beads by shape

	PERIODS	II	III	IV	V	VI	TOTALS
Agate	no.				4	5	9
	wt. (g)				*1.8*	*3.8*	*5.6*
Carnelian	no.				2	19	21
	wt. (g).				*0.2*	*4.3*	*4.5*
Garnet	no.				1	1	2
	wt. (g)				*0.3*	*0.2*	*0.5*
Lapis Lazuli	no.				*5*	*6*	11
	wt. (g)				*0.8*	*0.9*	*1.7*
Marble	no.				*1*	*1*	2
	wt. (g)				*9.3*	*0.5*	*9.8*
Quartz	no.				*1*	*2*	3
	wt. (g)				*1.4*	*3.3*	*4.7*
Schist	no.				*2*	*1*	3
	wt. (g)				*51.6*	*0.3*	*51.9*
Steatite	no.					*3*	*3*
	wt. (g)					*2*	*2*
Turquoise	no.					*1*	1
	wt. (g)					*0.8*	*0.8*
Totals	no.				16	39	55
	wt. (g)				*65.4*	*16.1*	*81.5*

Table 11.4: Stone beads by raw material

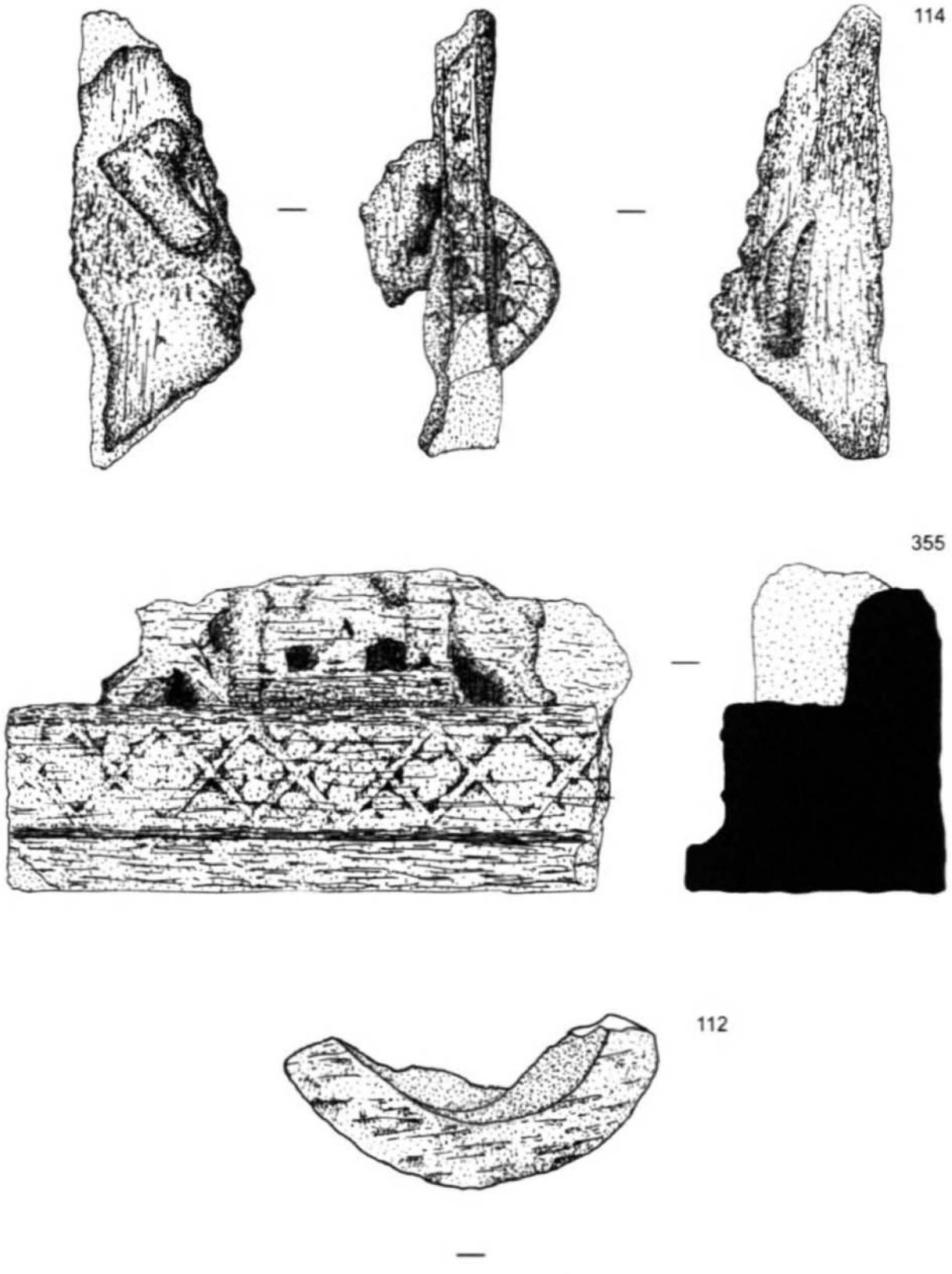

Figure 11.1: Stone objects (1:1)
Schist sculptural fragments (Sf 114 & Sf 355). Schist vessel (Sf 112)

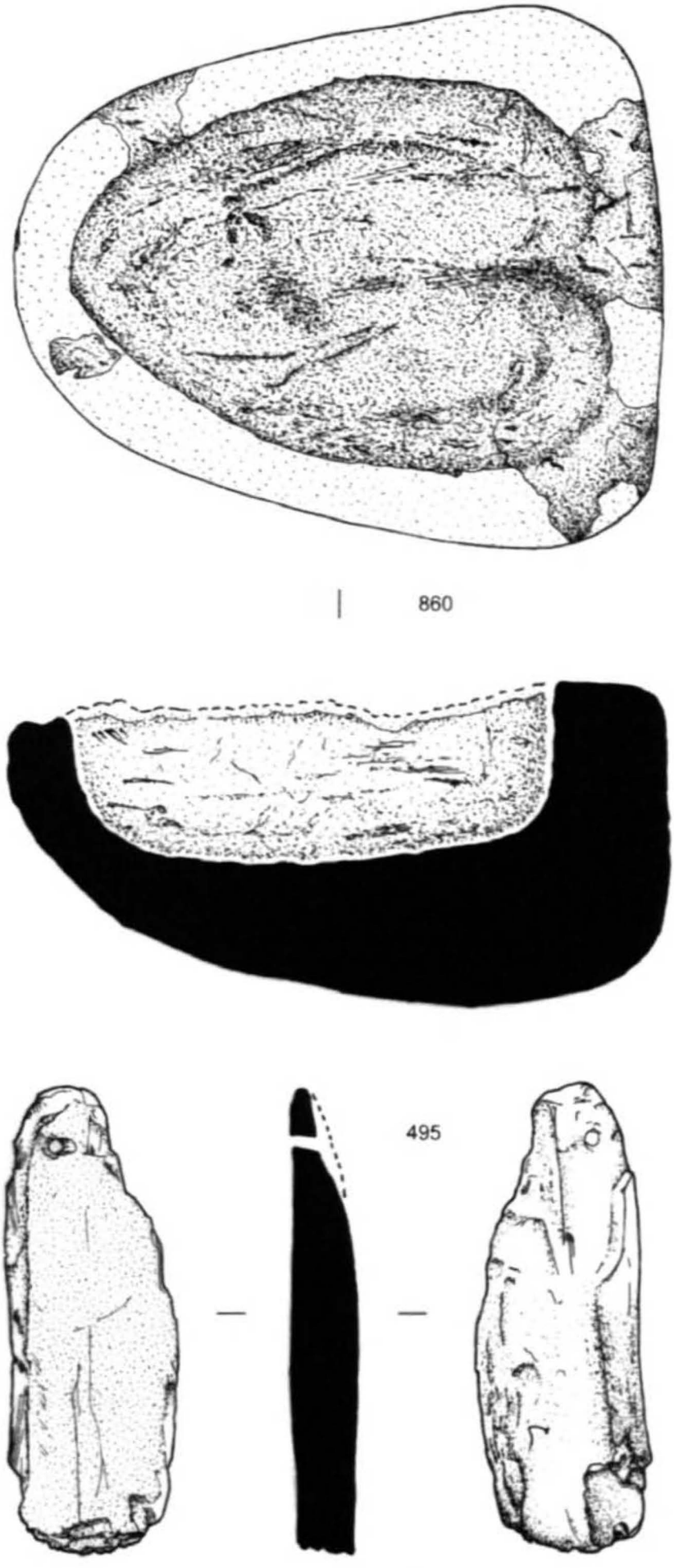

Figure 11.2: Stone objects (1:1)
Steatite lamp (Sf 860). Schist 'single-holed sickle' (Sf 495)

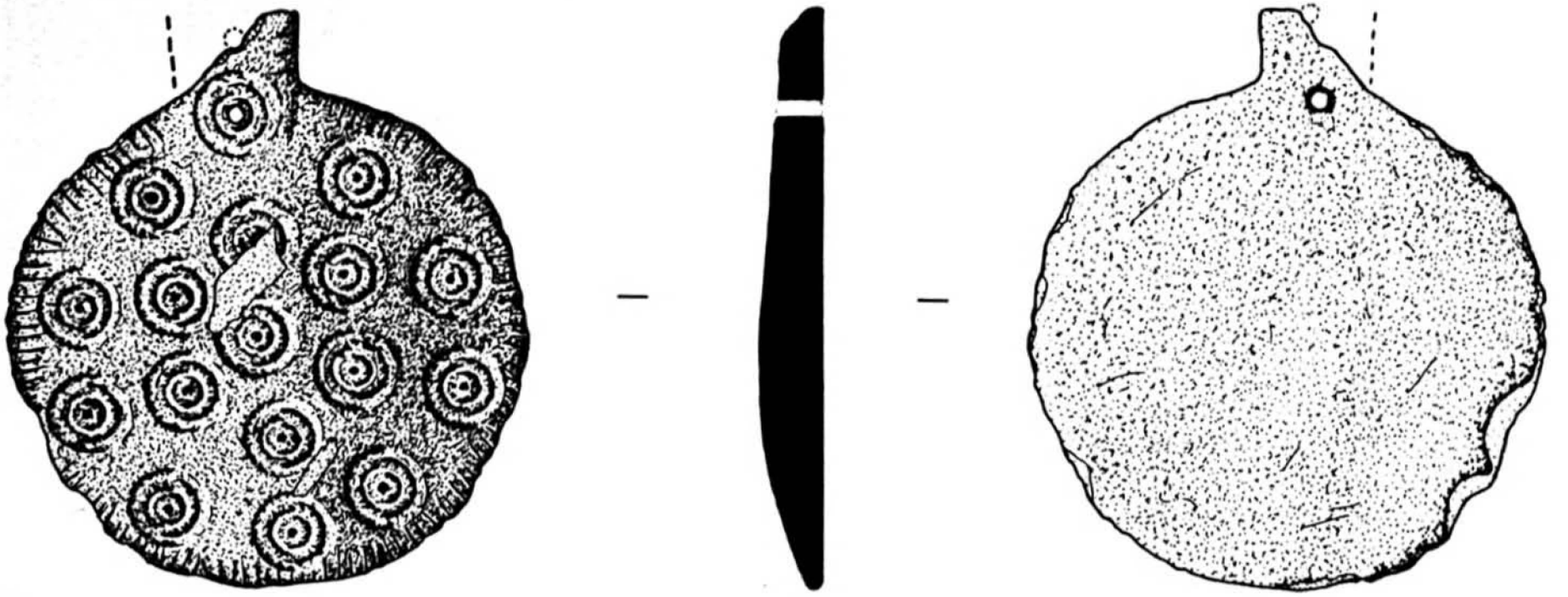

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Figure 11.3: Stone objects (1:1)
Steatite amulet/pendant (Sf 881)

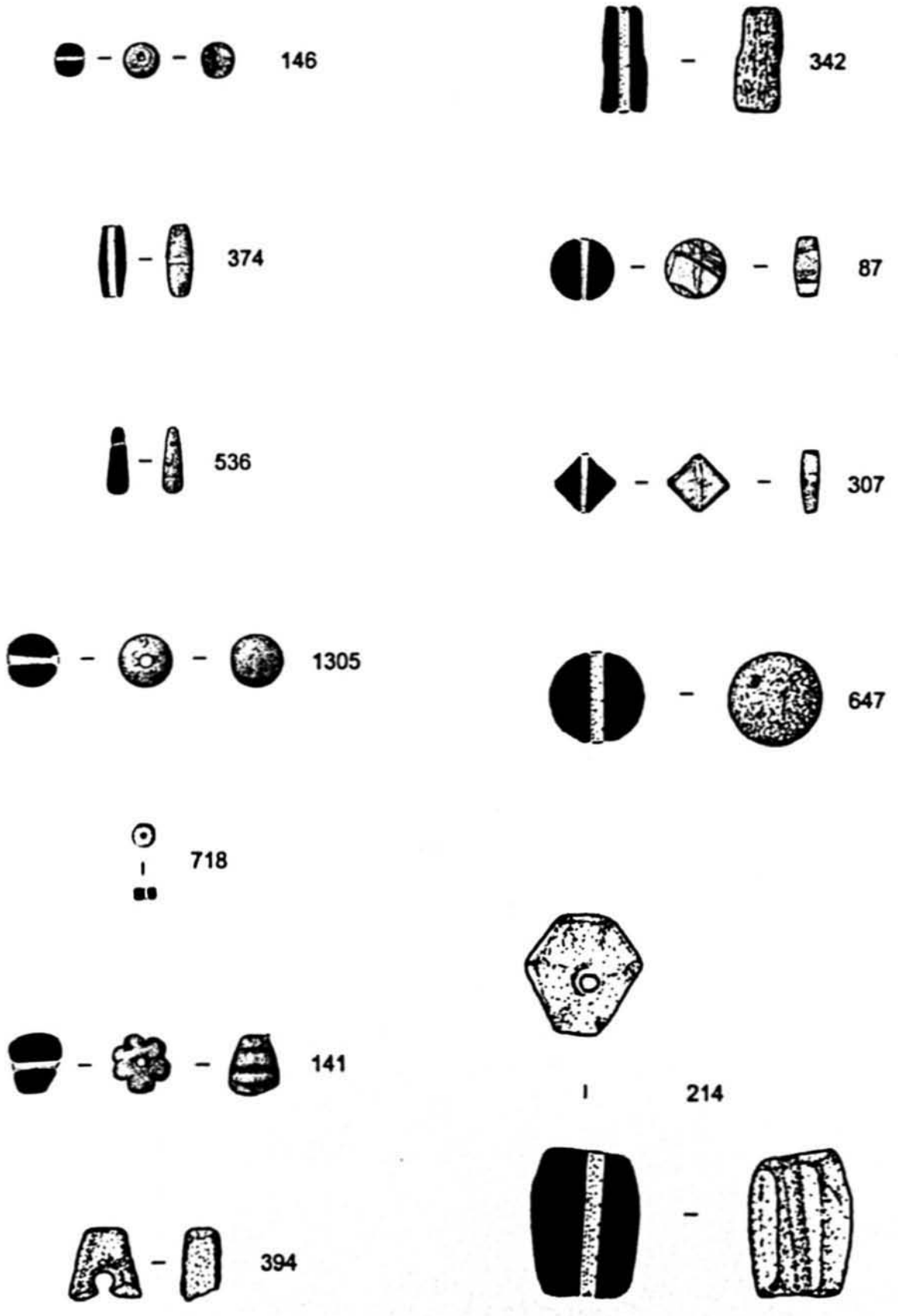
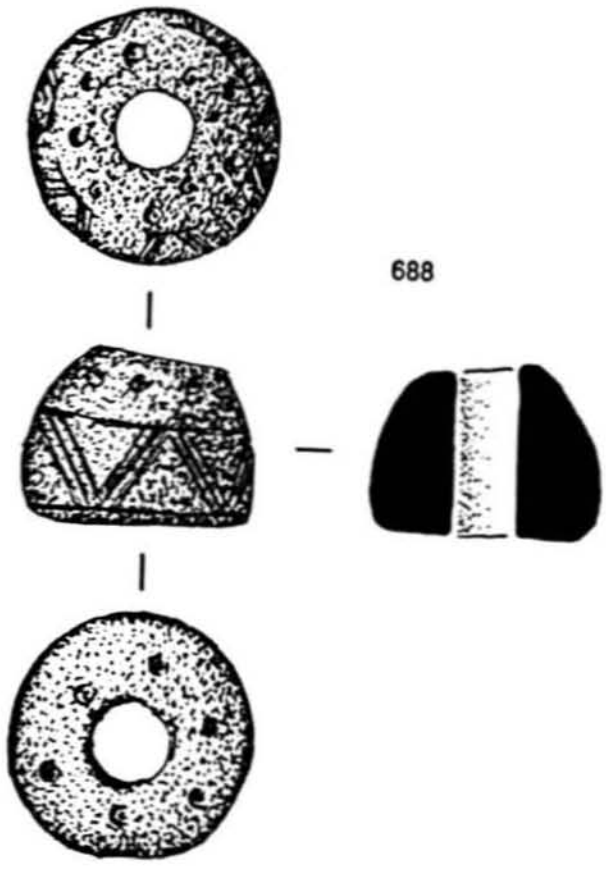


Figure 11.4: Stone objects (1:1)
Agate spherical bead (Sf 146). Carnelian barrel bead (Sf 342). Carnelian barrel beads (Sfs 374 & Sf 87). Carnelian dro bead (Sf 536). Carnelian square spacer (Sf 307). Carnelian spherical bead (Sf 1305). Garnet spherical bead (Sf 647). La squashed spherical bead (Sf 718). Quartz hexagonal bead (Sf 214). Turquoise notched barrel bead (Sf 141). Schist unic object (Sf 394)



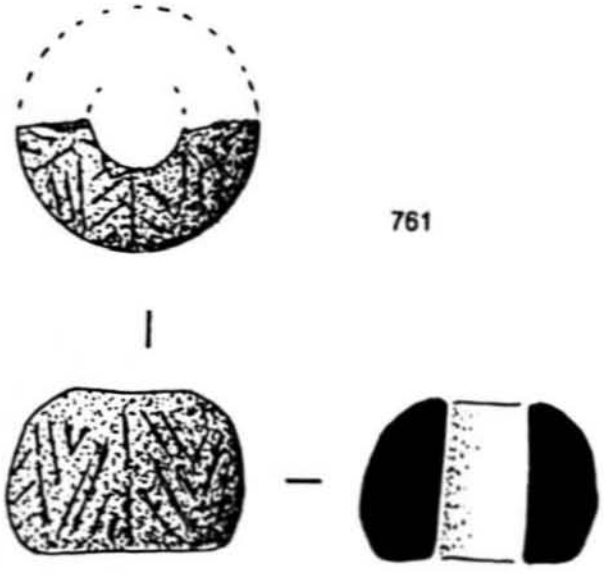


Figure 11.5: Stone objects (1:1)
Schist beehive-shaped bead/spindle-whorls (Sfs 688 & 761)

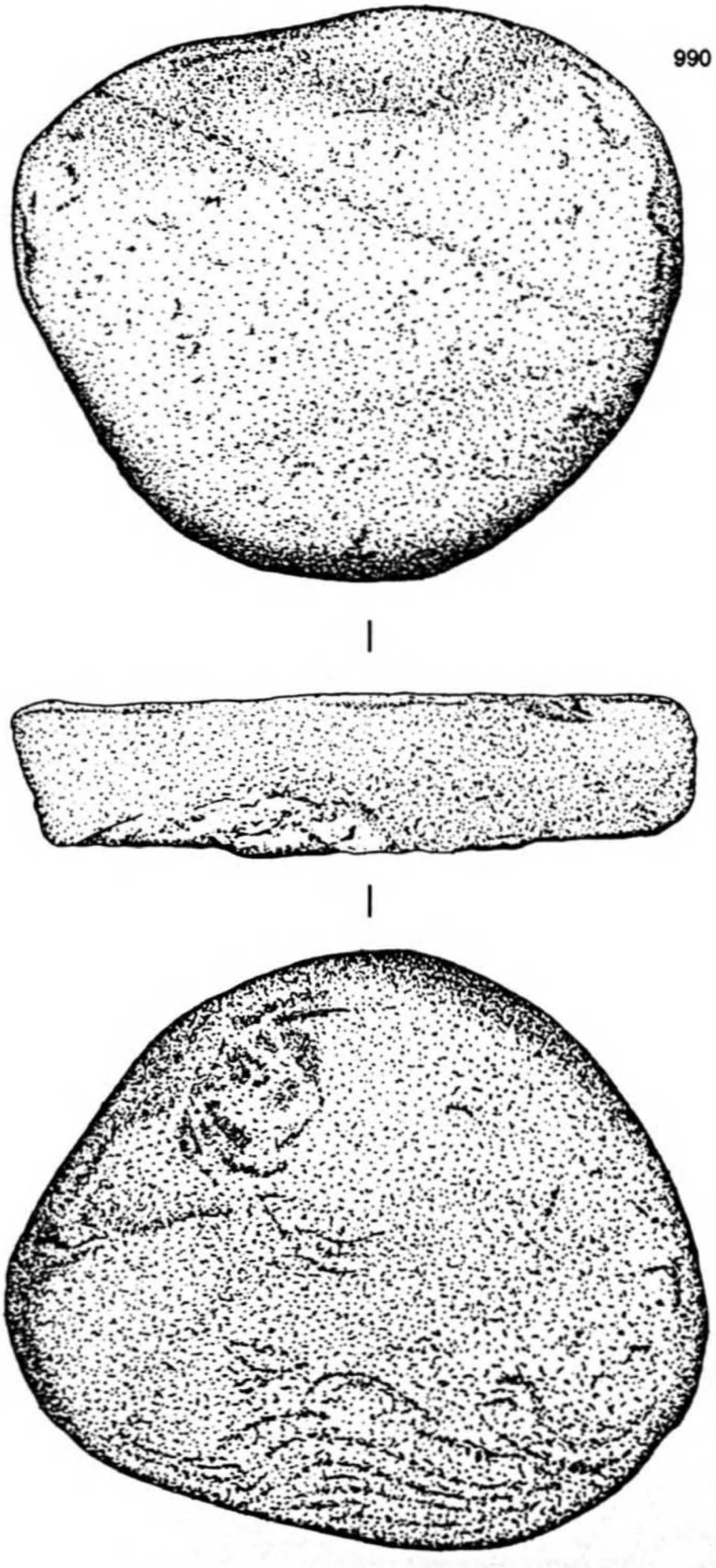


Figure 11.6: Stone objects (1:1)
Schist whetstone (Sf 990)

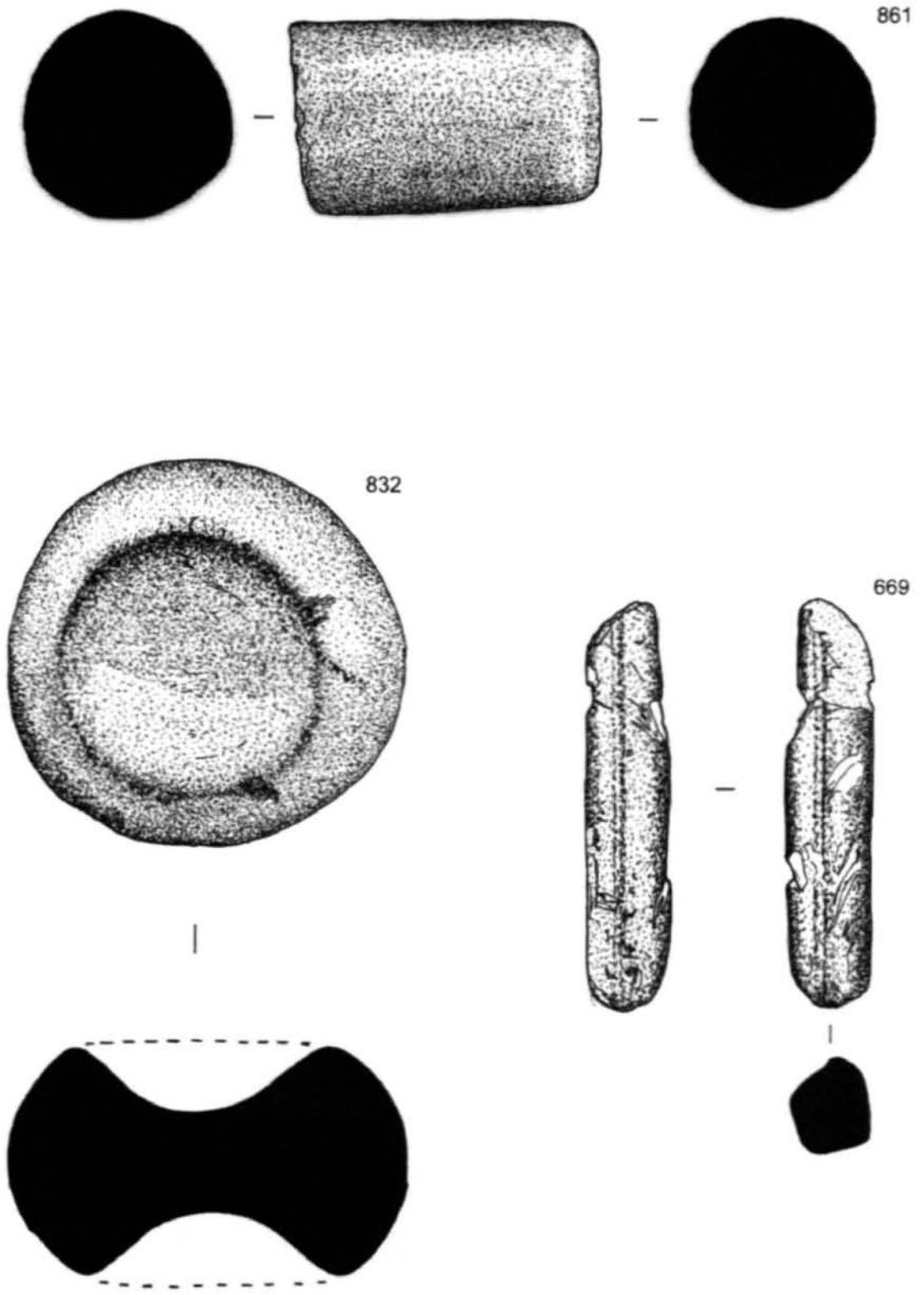


Figure 11.7: Stone objects (1:1)
Granite mortar/ringstone (Sf 832) and pestle (Sf 861). Steatite rod (Sf 669)

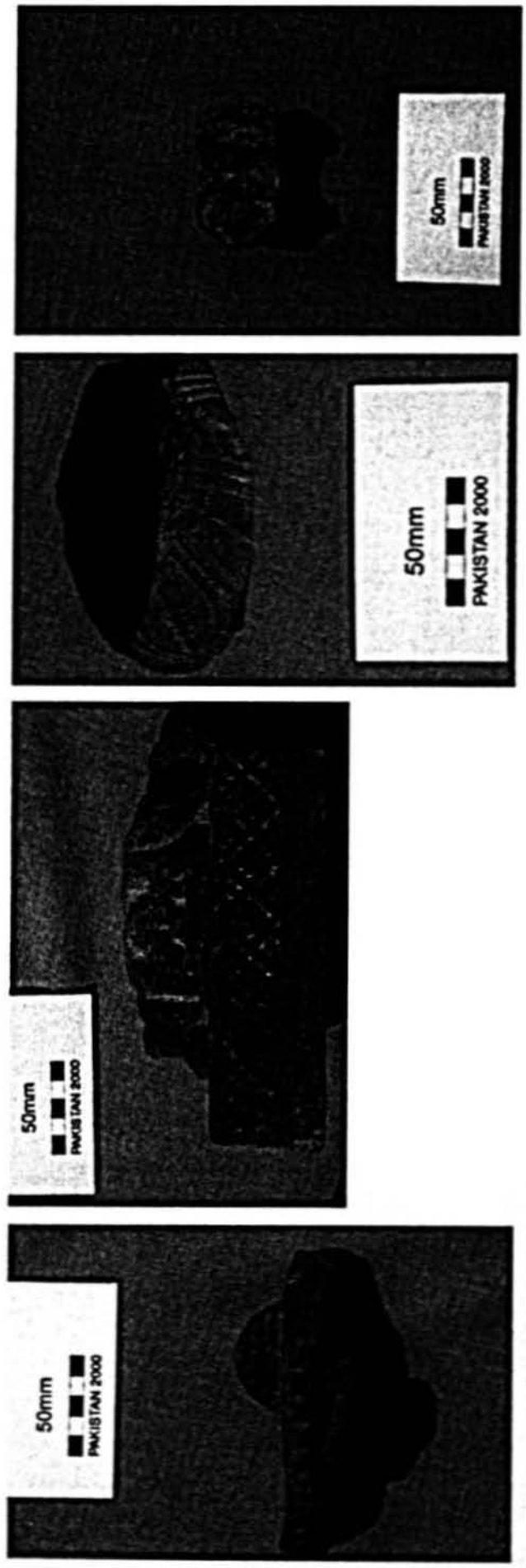


Plate 11.1: Stone objects
Schist sculptural fragments (Sfs 114 & 355). Schist vessel fragments (Sfs 112 & 189)

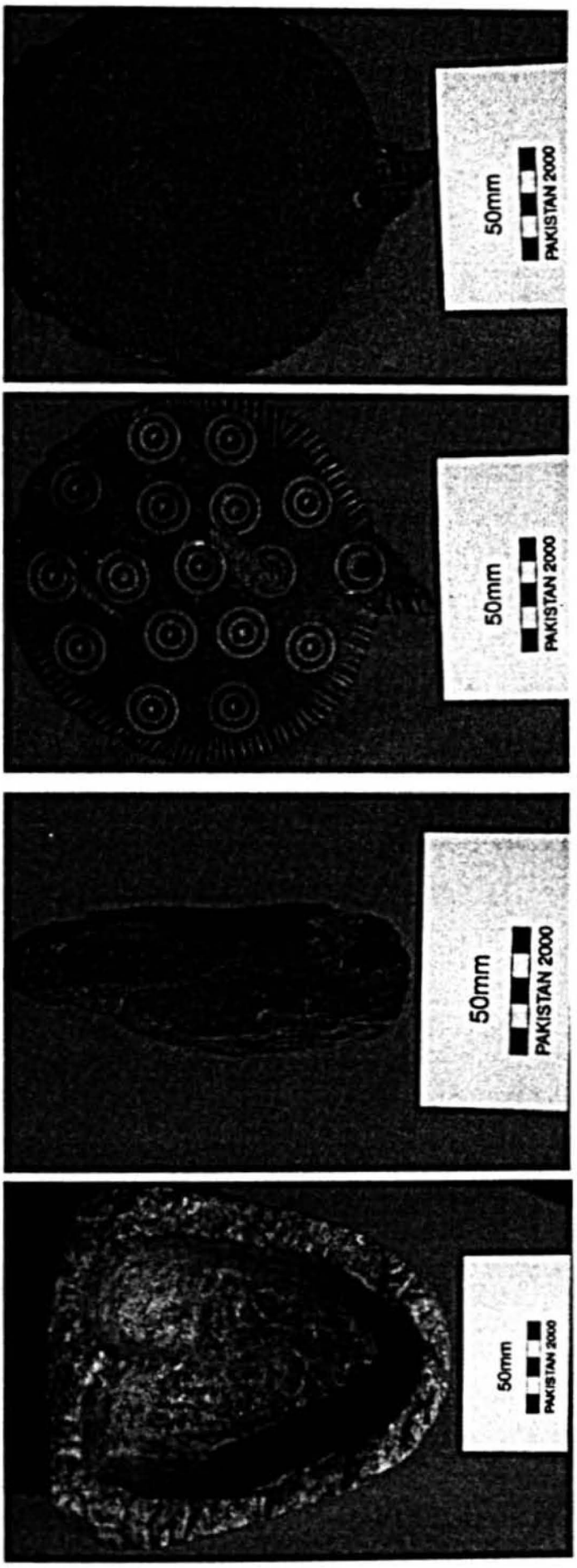


Plate 11.2: Stone objects
Steatite lamp (Sf 860). Schist 'single-holed sickle' (Sf 495). Steatite amulet/pendant (Sf 881) (front and rear)

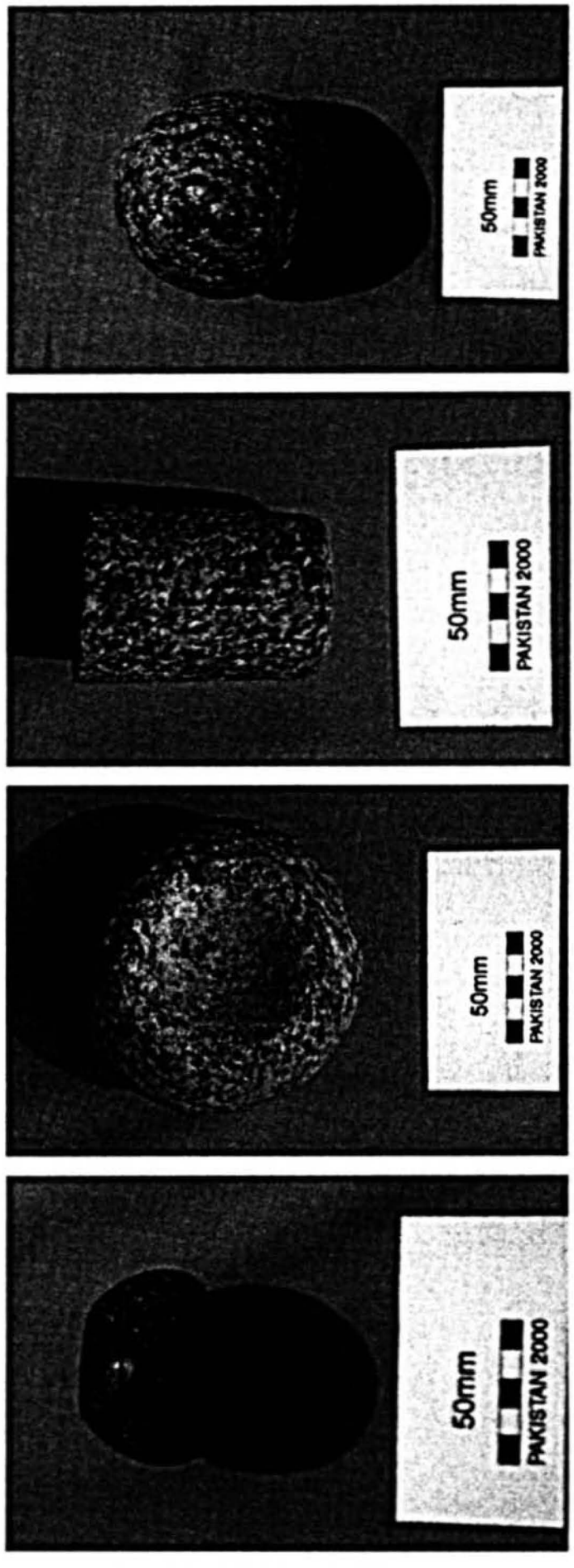


Plate 11.3: Stone objects
Schist beehive-shaped bead/spindle-whorl (Sf 688). Granite mortar/ringstone (Sf 832). Granite pestles (Sfs 861 & 1008)

CHAPTER 12

THE TERRACOTTA OBJECTS

Robin Coningham

12.1 INTRODUCTION

A total of 275 objects of terracotta (12397g) were recovered from trenches Ch. III, VI and VIII/IX. These included human and animal figurines, carts, bird chariots, wheels, beads, bangles, earrings, weights and other objects (Table 12.1). The overwhelming majority of these objects, 263, were recovered from the fills of robber pits or from erosion wash close to the surface, periods V and VI. The remainder, a total of 12 objects, comprising two human figurines, five animal figurines and five beads were recovered from in-situ contexts. Whilst this result may appear somewhat disappointing, the absence of many categories from these early contexts provides valuable negative evidence as with the other artefactual chapters. Indeed, it has long been remarked that there was an absence of human terracotta figurines from the early levels of the Early Historic period sites of the Bhir Mound (Marshall 1951: 440) and the Bala Hisar of Charsadda (Wheeler 1962: 106). This position was summarized by Sharif in 1969 when he said that such figures 'came in sometime during the second century BC' (Sharif 1969: 30), a view also shared by Helms following work at Kandahar (1997). Whilst we do not have examples of human figurines from our earliest occupation (period II) as our earliest example was recovered from succeeding period, we may still push Sharif's early urban human figurine horizon back several centuries to between c. 700 and 400 BC. These earlier dates at Charsadda notwithstanding, some of the earliest human figurines in the northern valleys have been recovered from Stacul's Swat Period IV (c. 1730–1300 BC) (1987: 111). It should be noted, however, that even material not in-situ might still yield useful information and provide analogies with other sites. For example, although human figurine Sf 483 was recovered from the fills of a late robber pit, it is clearly more closely related to early examples from Loebanr 3 and Bir-Kot Ghwandai (Swat Period IV) than material from excavations at the Bala Hisar of Charsadda, Taxila or Shaikhan Dheri. Our earliest figurine is a badly damaged animal (Sf 922) and was recovered from Period II as were two biconical and one 'beehive-shaped' terracotta beads (Sfs 326, 1075 & 1051). It should also be noted that analogies may be difficult at times because of differing terminologies, for example, Rahman's category of barrel-bicone-circular beads from Balambat (1969: 279) appears indistinguishable from Dani's category of short-barrel-bicone-circular net sinkers (1967: 193). This chapter introduces human figurines first, followed by animal and cart figurines, beads, bangles and other terracotta objects.

12.2 HUMAN FIGURINES

A total of 36 human figurines were recovered from the Bala Hisar of Charsadda, of which only two (Sfs 344 & 517) were recovered from in-situ contexts (Table 12.2). The remaining 34 figurines, often fragments or individual limbs, were recovered from the fills of robber pits or from mixed material in the uppermost levels. Example Sf 344 was recovered from the fills of ditch cut 61 (Ch. VI), firmly within period II. Its extremely good state of preservation suggests that it was not deposited on the surface, as there is little evidence of erosion. The figurine weighs 47.8g and measures 8.3cm by 2.5cm by 3.7cm. It is fiddle-shaped with incised eyes, a pinched nose, pointed arms and no legs or visible genitalia. It is provided with a necklace and its cloak or garment is covered in a pattern consisting of three repeated incisions. It has a smooth round depression within its body, perhaps marking an inclusion of another material rather than an error of firing. Its closest analogy with figurines from previous excavations at the Bala Hisar of Charsadda would be figurine 13 in Plate XXIII and figurine 2 in Plate XXVIA (Wheeler 1962). The former was recovered from Ch. V and dated to the earlier half of the second century BC and the latter from mixed layers in Ch. IIIA. Wheeler noted that such figures are occasionally associated with 'ritual tanks' and have been found at the Bhir Mound, Sirkap and Charsadda (Wheeler 1962: 109–110). Terracotta figurine 5 from stratum II of the Bhir Mound also shares some traits with Sf 344 (Marshall 1951: 442) although strong correlations may also been made with examples from the northern valleys. Although the figure from Grave 183 at Timargarha has two distinct legs, the fashioning of its eyes and head are similar to Sf 344 as are elements of examples from Period III of Balambat (Dani 1967: Plates LI and LIII.b & c). Figurines from Kalako-deray and Loebanr I are also similar and have been dated to Swat Period VII, between the 5th and 4th centuries BC (Stacul 1995: 123, 109) making a close chronological link with Charsadda. It is also notable that no affinities may be found with the corpus from Shaikhan Dheri (Dani 1966), indicating the later chronology of Charsadda's second city. The other in-situ human figurine, Sf 517, was recovered from Ch. VII from a charcoal-rich context above the massive mudbrick wall in elevation Ch. VII, which has a radiocarbon measure-

ment of between 80 and 220 AD (GrN-21831). The broken female figurine is unclothed and comprises the buttocks and upper leg portions with the upper half of body and lower leg missing. It has a dark red slip with lines of dark pigment drawn on the upper thigh, female genitalia, and waist. Figurines decorated with pigment are also known from the earliest levels of Shaikhan Dheri, between the mid-2nd century and mid-1st century BC (Dani 1966: 52) but surprisingly no examples were reported by Wheeler (1962) or Marshall (1951).

Although the vast majority of our collection is from disturbed contexts, it is still possible to make comments on the corpus and make references to similar examples. For example, another early example is probably represented by Sf 483, an oval or fiddle-shaped headless figure with three concentric rings of impressions centred on a central depression. Recovered from the fill of a later robber trench, Sf 483 has greater analogies with early examples 48.a & b from Loebanr 3's and Bir-Kot Ghwandai's Period IV (c. 1700–1300 BC) of the Swat Valley chronology (Stacul 1987: 110) than material from Wheeler's excavations at the Bala Hisar of Charsadda, Taxila or Shaikhan Dheri. Indeed, it may belong to some of the earliest phases of terracotta figurine making in this region. As might be expected, there are also three fragments of 'Baroque Ladies' within the collection. This is a well-known group but, unfortunately, all examples (Sfs 57, 945 & 1052) were retrieved from mixed levels so we cannot add to the discussion as to its phasing. Baroque Lady accessories were recovered from a number of mixed contexts and many of the disarticulated legs and lower trunks in the corpus may belong to such figurines. Plaque Sf 2000 was a surface find at the site and has no parallels within Wheeler's published corpus from Charsadda but close analogies are evident with Marshall's category of ex-voto plaques of female deity standing with full-flowing skirt from the Bhir mound (1951: 443, Plate 132.9). Our own example is missing its head and lower legs but it has arms at full length holding out the skirt on either side of the legs. It is interesting to note that only one example of this type was recovered from Sirkap, just outside the city walls, indicating the earlier nature of this figure type but we should note that some examples were recovered from Shaikhan Dheri (Dani 1966: 62). Sf 854 was recovered from trench Ch. VIII and is a moulded terracotta head with laurel wreath with clear parallels at Shaikhan Dheri. Illustrated on Plate XXVIII, Dani notes that this 'Hellenistic' type also has analogies with Sirkap (Marshall 1951: 451) and may be dated to between 50 BC and 50 AD (Dani 1966: 47). The presence of this later type at the Bala Hisar, supports the assumption that the site was not abandoned when the new city of Shaikhan Dheri was established but continued to be occupied, as also supported by the radiocarbon dates from elevation Ch. VII. Four examples of Wheeler's category of half-figures (1962: 108) were also recovered from mixed deposits (Sfs 617, 1185, 1186 & 1205) and we concur with Wheeler that they appear to have been manufactured as half-figures rather than representing broken or snapped figurines as they have been fired as such. Wheeler offers dates of the 3rd and 2nd centuries BC (ibid. 109), an assertion to which we cannot add, on account of the disturbed nature of the levels from which they were recovered. Figurine Sf 486 is a very rare type as it appears to represent the body of a extremely pregnant female but is missing both legs, neck, head and left and lower right arms. It has an inscribed line around the front of waist and further lines to indicate female genitalia. Its very pregnant form is rare, but another pregnant figure from the Bala Hisar of Charsadda was reported from layer 39 of Ch. I (Wheeler 1962: Plate XXVIA.3). Finally, although most examples are female, 6 of the 29 are male; Sf 522 is clearly male with small appliqué male genitalia. It has analogies with Wheeler's XXVIA.14, and Sfs 43, 155, 602, 685 & 1219 may also be presumed male as they lack breasts and female genitalia. Sfs 43 & 602 have holes pierced through both arms, a feature found in Wheeler's category of archers (XXVII.3).

12.2.1 Fiddle-shaped figurines

Special find no: **344** Trench: **Ch. VI** Context: **62**
Period: **III** Weight: **47.8g**
Material: **Terracotta** Dimensions: **8.3 x 2.5 x 3.7 cm**
Description: **Complete female, fiddle-shaped with incised eyes, pinched nose, pointed arms and no legs or visible genitalia. It has an incised necklace and its incised cloak or garment is covered in a pattern consisting of three repeated incisions. It has a rounded depression within its body, perhaps marking an inclusion of another material?**
(Colour Plate 1.3)
(Plate 12.1)
(Figure 12.1)

Special find no: **483** Trench: **Ch. VI** Context: **64**
Period: **V** Weight: **7.4g**
Material: **Terracotta** Dimensions: **3.7 x 2.3 x 0.9cm**
Description: **Headless figure, fiddle- or oval-shaped with three concentric rings on body centred on central depression.**
(Colour Plate 1.3)
(Plate 12.1)
(Figure 12.1)

12.2.2 Baroque Ladies

Special find no: **57** Trench: **Ch. VI** Context: **6**
Period: **VI** Weight: **53.8g**
Material: **Terracotta** Dimensions: **6.5 x 4.0 x 2.5cm**
Description: **Baroque Lady with legs, lower torso, left arm and lower right arm missing. Wearing two broad necklaces with diagonal slashes and formerly two (or three) rosettes in the hair.**
(Plate 12.1)
(Figure 12.2)

Special find no: **945** Trench: **Ch. IX** Context: **1046**
Period: **VI** Weight: **34.3g**
Material: **Terracotta** Dimensions: **3.5 x 5.8 x 1.9cm**
Description: **Baroque Lady with arms, lower body, and head missing. Three broad necklaces, the upper two with incised horizontal lines depicting beads and lower with diagonal incisions running top left to bottom right. In addition there is a vertical sash or scarf with 3 incisions.**
(Plate 12.2)
(Figure 12.2)

Special find no: **1052** Trench: **Ch. IX** Context: **1067**
Period: **V** Weight: **60.4g**
Material: **Terracotta** Dimensions: **7 x 5.6 x 2.6cm**
Description: **Baroque Lady with arms, legs and head missing. Two small appliqué breasts, single waistline and single necklace running top left to bottom right.**
(Plate 12.2)
(Figure 12.2)

12.2.3 Baroque earrings

Special find no: **212** Trench: **Ch. VI** Context: **41**
Period: **V** Weight: **5.2g**
Material: **terracotta** Dimensions: **1.6 x 2.3 x 2.6cm**
Description: **Disk-shaped earring or ear piece from Baroque Lady figurine; decorated in a 'rosette' form with central convex portion with impressed lines radiating outward to the edge.**

Special find no: **303** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **4.0g**
Material: **terracotta** Dimensions: **1.4 x 2.2 x 2.2cm**
Description: **Disk-shaped earring or ear piece from Baroque Lady figurine; decorated with one central incised line bisecting the disk with 10 perpendicular inscribed lines on either side of the central line.**

Special find no: **512** Trench: **Ch. VI** Context: **4**
Period: **VI** Weight: **4.0g**

Material: Terracotta Dimensions: 1.5 x 2.0 x 2.1cm
Description: Disk-shaped earring or ear piece from Baroque Lady figurine; decorated in a 'rosette' form with central concaved portion with impressed lines radiating outward to the edge.

Special find no: 608 Trench: Ch. VIII Context: 1000
Period: VI Weight: 6.8g
Material: Terracotta Dimensions: Diameter 2.6cm; height 1.4cm
Description: Undecorated earring or hair rosette from Baroque lady.

12.2.4 Half-figures

Special find no: 617 Trench: Ch. VIII Context: 1000
Period: VI Weight: 51.8g
Material: Terracotta Dimensions: 7.9 x 3.2 x 2.5cm
Description: Buttock and leg fragment of half-figurine. Waistband and half pudenda.
Reference: Wheeler 1962: 108.
(Figure 12.3)

Special find no: 1185 Trench: Ch. VIII Context: 1003
Period: V Weight: 59.6g
Material: Terracotta Dimensions: 8.5 x 3.1 x 2.3cm
Description: Buttock and leg fragment of half-figurine with waistband and black and red linear decoration.
Reference: Wheeler 1962: 108.
(Figure 12.3)

Special find no: 1186 Trench: Ch. VIII Context: 1048
Period: V Weight: 50.4g
Material: Terracotta Dimensions: 8.8 x 3.0 x 1.9cm
Description: Buttock and leg fragment of half-figurine with waistband.
Reference: Wheeler 1962: 108.

Special find no: 1205 Trench: Ch. VIII Context: 1053
Period: V Weight: 23.2g
Material: Terracotta Dimensions: 3.8 x 2.9 x 2.2cm
Description: Buttock of half-figurine with waistband and half pudenda.

12.2.5 Female plaque

Special find no: 2000 Trench: surface Context: surface
Period: VI Weight: 107.4g
Material: Terracotta Dimensions: 10.6 x 7.2 x 1.7 cm
Description: Moulded plaque of female missing lower legs and head. Arms outstretched and holding skirt/cloak to either side of legs. Ornate belt worn.
(Figure 12.4)

12.2.6 Archers

Special find no: 43 Trench: Ch. III Context: 1
Period: VI Weight: 25.4g
Material: Terracotta Dimensions: 4.0 x 4.7 x 1.6cm
Description: 'Archer'. Upper torso with legs, head and one arm missing. Pierced in both arms (groove can be seen where other arm is missing).
(Figure 12.4)

Special find no: 602 Trench: Ch. VIII Context: 1000
Period: VI Weight: 22.8g
Material: Terracotta Dimensions: 4.4 x 5.3 x 1.7cm
Description: Hand-made rounded figurine. Head and legs missing, pinched arms. Transversely pierced, x2, through thoracic region.
(Plate 12.2)
(Figure 12.4)

12.2.7 Head with wreath

Special find no: 854 Trench: Ch. VIII Context: 1018
Period: V Weight: 36.5g
Material: Terracotta Dimensions: 5.2 x 3.5 x 2.4cm
Description: Moulded terracotta head with laurel wreath. Worn, therefore difficult to compare.
(Plate 12.2)
(Figure 12.4)

12.2.8 Pregnant figurine

Special find no: 486 Trench: Ch. VI Context: 64
Period: V Weight: 105.0g
Material: Terracotta Dimensions: 6.0 x 5.0 x 4.7cm
Description: Body of pregnant female missing both legs, neck, head and left and lower right arms. Incribed line around front of waist and to indicate female genitalia.
(Plate 12.3)
(Figure 12.5)

12.2.9 Unidentified female

Special find no: 167 Trench: Ch. VI Context: 35
Period: V Weight: 51.2g
Material: Terracotta Dimensions: 5.4 x 4.2 x 3.3cm
Description: Buttocks and right side of human form. Inscribed line runs around the buttocks and continues onto the side. Decorated in dark red slip.

Special find no: 183 Trench: Ch. VI Context: 7
Period: VI Weight: 29.0g
Material: Terracotta Dimensions: 4.5 x 3.6 x 1.9cm
Description: Body of human missing neck, head, arms and legs. Inscribed line at chest and top of pelvis and remnants of appliqué genitalia.

Special find no: 280 Trench: Ch. VI Context: 45
Period: V Weight: 50.4g
Material: Terracotta Dimensions: 6.4 x 2.7 x 3.0cm
Description: Moulded left of female human missing upper half of body and lower leg. Incised line running round buttocks and abdomen and indicating female genitalia. Pigment has been applied to waist area, thigh and genitalia.

Special find no: 299 Trench: Ch. III Context: 1
Period: VI Weight: 120.0g
Material: Terracotta Dimensions: 7.3 x 4.9 x 3.1cm
Description: Body of female missing chest and both lower legs. Inscribed line running round top of pelvis, and showing female genitalia. Left thigh weathered, and right buttock and lower back are missing. Evidence of appliqué at waist level. Figure has been coated in dark red slip and painted with dark pigment on curves of hips, on the back, and on the thighs.
(Plate 12.3)
(Figure 12.5)

Special find no: 310 Trench: Ch. VI Context: 58
Period: V Weight: 41.4g
Material: Terracotta Dimensions: 6.5 x 2.1 x 3.0cm
Description: Moulded left of female human missing upper half of body and lower leg. Incised line running round buttock and abdomen and indicating female genitalia and is decorated with dark red slip.

Special find no: 517 Trench: Ch. VII Context: 998
Period: IV Weight: 24.8g
Material: Terracotta Dimensions: 5.1 x 2.5 x 1.8cm
Description: Moulded right of female human missing upper half of body and lower leg. Decorated in dark red slip with dark pigment lines have been drawn on upper thigh and female genitalia, and also coming down from waist.

Special find no: 804 Trench: Ch. VIII Context: 1010
Period: V Weight: 36.2g
Material: Terracotta Dimensions: 8.3 x 2.1 x 2.9cm
Description: Buttock and leg fragment with incised waistband and black linear decoration.

Special find no: 1085 Trench: Ch. IX Context: 1058
Period: V Weight: 22g
Material: Terracotta Dimensions: 4.2 x 4.5 x 1cm
Description: Hand made flat female figurine with legs missing. V-shaped girdle incised, single neckband and hair tied over head in flat bun.
(Plate 12.3)

Special find no: 1193 Trench: Ch. VIII Context: Unstratified
Period: VI Weight: 15.2g
Material: Terracotta Dimensions: 3.4 x 2.5 x 1.6cm
Description: Midriff and buttocks. Incised inverted 'v' on front and back of torso.

Special find no: 1223 Trench: Ch. VIII Context: 1014
Period: V Weight: 38.7g
Material: Terracotta Dimensions: 5.2 x 3.6 x 2.7cm
Description: Buttock and leg fragment with incised waist-band, badly worn.

12.2.10 Unidentified male

Special find no: 155 Trench: Ch. VI Context: 7
Period: VI Weight: 14.1g
Material: Terracotta Dimensions: 2.4 x 3.7 x 1.7cm
Description: Upper torso with legs, arms and head missing. Sequence of four linear indents on both front and back
(Figure 12.6).

Special find no: 522 Trench: Ch. VI Context: 4
Period: VI Weight: 59.8g
Material: Terracotta Dimensions: 4.8 x 4.1 x 1.2cm
Description: Lower male torso with legs, arms and head missing. Appliqué genitals and waistband consisting of continuous sequence of horizontal indents.
(Figure 12.6)

Special find no: 685 Trench: Ch. VIII Context: 1003
Period: V Weight: 51.4g
Material: Terracotta Dimensions: 7.4 x 5.8 x 1.8cm
Description: Hand-made rounded figurine missing head and tips of legs. Splayed legs, pinched arms, sex uncertain, with no decoration.
(Plate 12.4)
(Figure 12.6)

Special find no: 1219 Trench: Ch. VIII Context: 1006
Period: V Weight: 36.1g
Material: Terracotta Dimensions: 6.2 x 4.6 x 1.1cm
Description: Single moulded flat figurine with head and right leg missing. Fits Dani human figurine Type V Variety A.
(Plate 12.4)
(Figure 12.7)

12.2.11 Unidentified

Special find no: 109 Trench: Ch. VI Context: 7
Period: VI Weight: 11.7g
Material: Terracotta Dimensions: 3.4 x 2.6 x 1.6cm
Description: Hand-made figure with pinched arms and feet. Head and left arm missing.
(Plate 12.4)

Special find no: 290 Trench: Ch. VI Context: 54
Period: V Weight: 8.1g
Material: Terracotta Dimensions: 3.8 x 2.7 x 1.4cm
Description: Pinched right arm.

Special Finds no: 545 Trench: Ch. III Context: 1
Period: VI Weight: 26.6g
Material: terracotta Dimensions: 4.2 x 4.9 x 1.8cm
Description: Unidentifiable portion of figurine?

Special find no: 605 Trench: Ch. VIII Context: 1000
Period: VI Weight: 37.6g
Material: Terracotta Dimensions: Diameter 2.7cm, height 6.2cm.
Description: Leg and foot fragment. Human?
(Plate 12.4)
(Figure 12.7)

12.3 ANIMAL FIGURINES

Animal figurines represent the largest category of terracotta object with a total count of 163 (9910.2g), almost 75% of the total weight of all terracotta objects (Table 12.3). Unfortunately, all but 5 examples were recovered from mixed levels, represented by fills of robber pits or erosion washes. By weight, the most abundant category comprises figurine bodies (5085.7g) whose distinguishing features have been removed through either human action or erosion, but the next most abundant category is represented by elephants. Elephants are followed by horses, bulls, unidentified limbs, monkeys, rams, and camels, and by a number of less frequently occurring animals such as one cat, one dog, one tiger and a buffalo. The earliest in-situ example was recovered from context 1021 in trench Ch. VIII. An unidentifiable body partially painted with a dark brown slip, it was recovered from amongst the uppermost levels of in-situ occupation in the trench, but firmly within Period II. A further three unidentifiable fragments of animal figurines (Sfs 494, 508 & 509) were recovered from fills of ditch cut 55 in trench Ch. VI. Ditch cut 55 has yielded dates between the 8th and 5th centuries BC and is allocated to site Period III. Sf 494 was found in context 66, the uppermost fill of ditch 55, and comprised a conical-shaped leg covered in a dark red slip. Sf 508 was similar in shape and was recovered from the basal fill of the same feature, just below context 79, which contained unidentified body Sf 509. This body was decorated with garlands close to the neck and a bell, suggesting that it might have been a horse. Also recovered from Period III was unidentifiable figurine body Sf 104, which was found in one of the newly discovered postholes in trench Ch. III. As with the relatively late presence of human figurines at Taxila, animal figurines are also restricted to the upper levels of the Bhir Mound (Sharif 1969: 33). With the presence of animal figurines in period III and II, again the Bala Hisar demonstrates closer links with the archaeology of the northern valleys than with the other urban forms of the northern Punjab.

We have also included within the category of 'Other Terracotta Figurines' carts, bird chariots and wheels, none of which were recovered from in-situ archaeological deposits. Fragments of carts have also been recovered from Wheeler's excavations at Charsadda (1962), Marshall's at Taxila (1951) and Dani's at Shaikhan Dheri (Dani 1966), but not Balambat. It is notable that only three examples were recovered from Taxila, two from the Bhir mound and one from Sirkap (Marshall 1951: 452). A single example of a bird chariot (Sf 894) was recovered from the recent fieldwork at the Bala Hisar of Charsadda, again from mixed deposits. This type is known from Wheeler's excavations at Charsadda (1962: 114), Dani's at Shaikhan Dheri (1966: 104) and Marshall at the Bhir Mound at Sirkap (1951: 453). It is highly probable that artefact BKG 170 from the excavations at Bir-kot-ghwandai, represents the decorated tail feather end of such a bird chariot rather than a circumcised penis as suggested by Stacul (1987: 110). If this is the case, it is highly probable that this artefact has been redeposited in Swat Period IV levels from much higher up in the Bir-kot-ghwandai sequence. A total of 3 wheels were recovered, all from mixed contexts. They are known from Taxila (Marshall 1951), Charsadda (Wheeler 1962) and Shaikhan Dheri (Dani 1967) and were attached to terracotta carts and animals as is probable for ceramic wheel category 8.3.1.6.1. Sfs 646 and 1013 both have one flat side and one hubbed side and Sf 258 is decorated with a stamp to resemble spokes. These and our other categories are well known within the sequences of Taxila (Marshall 1951), the Bala Hisar (Wheeler 1962), Shaikhan Dheri (Dani 1966) and the northern valleys (Stacul 1987), demonstrating the pervasive cultural character of terracotta working in this region.

12.3.1 Buffalos

Special find no: 451 Trench: Ch. VI Context: 64
Period: V Weight: 13.9g
Material: Terracotta Dimensions: 2.4 x 3.9 x 2.9cm
Description: Head of buffalo. Missing right horn, snout and right side of face. Left horn pointing to what would be the rear of the animal.
(Plate 12.5)
(Figure 12.8)

12.3.2 Bulls

Special find no: 83 Trench: Ch. III Context: 1
Period: VI Weight: 13.3g
Material: Terracotta Dimensions: 3.4 x 3.7 x 2.5cm
Description: Humped bull head missing horns and snout, neck, and torso.

Special find no: 84 Trench: Ch. III Context: 1
Period: VI Weight: 15.8g
Material: Terracotta Dimensions: 2.9 x 3.2 x 2.3cm
Description: Hump of bull.

Special find no: 88 Trench: Ch. III Context: 1
Period: VI Weight: 185.0g
Material: Terracotta Dimensions: 6.8 x 7.3 x 4.9cm
Description: Humped bull head missing horns and snout, neck, and torso.
(Plate 12.5)

Special find no: 89 Trench: Ch. III Context: 1
Period: VI Weight: 165.0g
Material: Terracotta Dimensions: 7.0 x 8.5 x 3.9cm
Description: Humped bull head, neck, and torso missing horns and mouth with two concentric circles centred between base of horns.

Special find no: 133 Trench: Ch. VI Context: 6
Period: VI Weight: 8.3g
Material: Terracotta Dimensions: 2.2 x 3.2 x 2.3cm
Description: Head of bull. Horns are broken at base. Centre of forehead is scribed with a single line 0.7cm long. The eyes are appliqué and at the end of the snout is an incised mouth and nostrils. Front portion of humped bull torso missing left and right lower legs. Also missing are hump and facial features. On right side of the head is a large ear.
(Figure 12.8)

Special find no: 157 Trench: Ch. VI Context: 7
Period: VI Weight: 79.8g
Material: Terracotta Dimensions: 5.8 x 5.9 x 4.6cm
Description: Front portion of humped bull torso missing left and right lower legs. Also missing are hump and facial features. On right side of the head is a large ear.

Special find no: 158 Trench: Ch. VI Context: 7
Period: VI Weight: 50.2g
Material: Terracotta Dimensions: 5.9 x 4.8 x 3.2cm
Description: Humped bull head, neck and torso. The figure is heavily worn as evidenced by smoothed break edges.

Special find no: 213 Trench: Ch. VI Context: 37
Period: V Weight: 3.9g
Material: Terracotta Dimensions: 2.5 x 1.2 x 1.6cm
Description: Horn appliqué from bull figurine with red slip.

Special find no: 220 Trench: Ch. VI Context: 41
Period: V Weight: 61.8g
Material: Terracotta Dimensions: 5.8 x 3.4 x 4.0cm
Description: Head and torso of bull with visible base of hump. Missing snout, and lower legs.

Special find no: 282 Trench: Ch. VI Context: 45
Period: V Weight: 46.3g
Material: Terracotta Dimensions: 4.9 x 5.5 x 3.2cm
Description: Head and torso of bull with hump. Missing horns and lower legs.

Special find no: 314 Trench: Ch. VI Context: 54
Period: V Weight: 10.7g
Material: Terracotta Dimensions: 3.2 x 3.0 x 1.5cm
Description: Body and neck of humped bull missing head and lower portions of both front and rear right hand legs. Hump at base of neck. Pierced through the neck from side to side. Appliqué tail missing. Darkened on the right side.
(Plate 12.5)
(Figure 12.8)

Special find no: 335 Trench: Ch. VI Context: 58
Period: V Weight: 6.8g
Material: Terracotta Dimensions: 3.6 x 1.6 x 1.8cm
Description: Horn appliqué from bull figurine.

Special find no: 1222 Trench: Ch. VIII Context: 1003
Period: V Weight: 11.4g
Material: Terracotta Dimensions: 4.3 (length) x 2.6cm (base diam.)
Description: Bulls horn appliqué with dark brown pigment on the portion that would have been next to the brow of the bull.

12.3.3 Camels

Special find no: 113 Trench: Ch. VI Context: 35
Period: V Weight: 35.9g
Material: Dimensions: 3.8 x 3.4 x 3.0 cm
Description: Head and upper neck of camel with lateral piercing through the snout. The eyes are impressed circles with central impressed points. At the break point on the neck there are impressed points on the right side.
(Plate 12.5)

Special find no: 115 Trench: Ch. VI Context: 7
Period: VI Weight: 47.5g
Material: Terracotta Dimensions: 5.6 x 5.0 x 2.6cm
Description: Head and neck of camel missing right side of snout and right ear. Surfaces are heavily degraded.

Special find no: 195 Trench: Ch. VI Context: 7
Period: VI Weight: 25.8g
Material: Dimensions: 4.8 x 3.5X 2.6 cm
Description: Torso of camel and part of neck. Missing left and lower right hand leg. Visible hump on neck, triangular in shape.

Special find no: 635 Trench: Ch. VIII Context: 1001
Period: V Weight: 45.2g
Material: Dimensions: 5.9 x 2.8 x 2.7 cm
Description: Head and neck of camel with brown slipped pattern at front of neck. Appliqué eye with central piercing with line of circular indentation from end of snout to top of head.
(Plate 12.6)

12.3.4 Cats

Special find no: 171 Trench: Ch. VI Context: 35
Period: V Weight: 9.7g
Material: Terracotta Dimensions: 2.5 x 1.8 x 2.6cm
Description: Appliqué head of a cat.
References: Dani 1966: 99–100; Wheeler 1962: 113.

12.3.5 Dogs

Special find no: 1077 Trench: Ch. IX Context: 1035
Period: VI Weight: 69.8g
Material: Terracotta Dimensions: 6.3 x 3.9 x 3.1cm
Description: Body and base of tail of dog, missing legs and neck.

12.3.6 Elephants

Special find no: 160 Trench: Ch. VI Context: 7
Period: VI Weight: 94.2g
Material: Terracotta Dimensions: 5.3 x 5.8 x 4.2cm
Description: Elephant head, upper trunk and torso. The top of the head is decorated with impressed circles with a line of the same size circles running the length of the trunk. The facial features are incised diamond shaped eyes and portions of two large ears, and base of tusks from under the trunk

Special find no: 265 Trench: Ch. III Context: 1
Period: VI Weight: 5.2g
Material: Terracotta Dimensions: 3.0 x 1.4 x 1.5cm
Description: End of elephant trunk with red slip.
References: Dani 1966: 71–103; Wheeler 1962: 112–113.

Special find no: 757 Trench: Ch. VIII Context: 1016
Period: V Weight: 300g
Material: Terracotta Dimensions: 6.1 x 10.4 x 4.2cm
Description: Elephant head, upper trunk and body (missing legs). The top of the head is decorated with three impressed circles in a line running from the top of the head to the break at the trunk. Eyes are also of the same incised pattern: one circle with a smaller on impressed in the centre.

Special find no: 792 Trench: Ch. VIII Context: 1003
Period: V Weight: 380.0g
Material: Terracotta Dimensions: 6.0 x 10.0 x 9.0cm
Description: Elephant head? missing identifiable ears, evidence of where the appliqué tusks would have been, and the trunk has been hollowed prior to firing. Decorations are a detailed incised eye and a brown slipped star pattern centred on the forehead.
(Figure 12.9)

Special find no: 853 Trench: Ch. VIII Context: 1018
Period: V Weight: 170.0g
Material: Terracotta Dimensions: 6.6 x 9.0 x 4.1cm
Description: Elephant head, upper trunk and torso. The top of the head is decorated with impressed circles with a line of the same size circles running the length of the trunk. The facial features are one appliqué eye with central impressed circle portions of two large ears, and base of tusks from under the trunk

Special find no: 857 Trench: Ch. VIII Context: 1019
Period: V Weight: 210.0g
Material: Terracotta Dimensions: 7.0 x 11.0 x 3.8cm
Description: Elephant head, upper trunk, and body. The eyes are impressed circles with smaller circles in the centre. The head is decorated with four parallel horizontal grooves beginning at the top of the head and ending even with the bottom of the eyes perpendicular to these lines and centrally located is a line running from the length of what is left of the trunk.
(Plate 12.6)
(Figure 12.10)

Special find no: 1184 Trench: Ch. VIII Context: 1015
Period: V Weight: 45.3g
Material: Terracotta Dimensions: 6.2 x 4.2 x 3.0cm
Description: Elephant head and upper trunk. The only decoration is in the form of one eye scribed into the clay before firing. The other side of the head does not have an eye.

Special find no: 1194 Trench: Ch. VIII Context: 1014
Period: V Weight: 125.0g
Material: Terracotta Dimensions: 7.0 x 6.4 x 4.4cm
Description: Elephant head and upper torso. With holes in preparation of appliqué would have been The only decoration is in the form of one eye scribed into the clay before firing. The other side of the head does not have an eye.

12.3.7 Horses

Special find no: 77 Trench: Ch. III Context: 1
Period: VI Weight: 70.4g
Material: Dimensions: 7.8 x 3.9 x 3.5 cm
Description: Horse torso with base of neck, mane and right front leg with dark brown slip at the neck.

Special find no. 85 Trench: Ch. III Context: 1
Period: VI Weight: 20g
Material: Dimensions: 3.4 x 1.5 x 3 cm
Description: Horse body and head but missing legs and tail. Pinched mane and eyes formed by single piercing from one side to the other.
(Figure 12.8)

Special find no. 107 Trench: Ch. VI Context: 7
Period: VI Weight: 180.0g
Material: Terracotta Dimensions: 6.9 x 8.6 x 4.6cm
Description: Horse body with lower neck and base of mane, missing buttocks and rear legs and front legs.

Special find no: 134 Trench: Ch. III Context: 7
Period: VI Weight: 95.6g
Material: Terracotta Dimensions: 5.9 x 6.7 x 3.5cm
Description: Neck of and part of mane of horse with appliqué collar decorated with pressed point design. Part of left side missing. Band of yellow slip at top of neck.

Special find no: 151 Trench: Ch. VI Context: 40
Period: V Weight: 75.0g
Material: Terracotta Dimensions: 5.1 x 4.6 x 4.2cm
Description: Front portion of horse torso with base of neck and mane and upper portions of front legs. Torso and right side decorated with impressed circles.

Special find no: 166 Trench: Ch. VI Context: 40
Period: V Weight: 60.6g
Material: Terracotta Dimensions: 6.1 x 3.6 x 4.4cm
Description: Neck and mane of horse decorated with point impressed lines on side of neck with impressed circle in centre of torso.

Special find no: 378 Trench: Ch. VI Context: 38
Period: V Weight: 31.0g
Material: Terracotta Dimensions: 4.8 x 2.9 x 2.7cm
Description: Torso and base of pinched mane of horse.

Special find no: 680 Trench: Ch. VIII Context: 1003
Period: V Weight: 31.4g
Material: Dimensions: 5.5 x 4.8 x 2.1 cm
Description: Head, arched neck and mane of horse. Mane is of pinched clay and smoothed with no appliqué or incised markings. At top of mane behind ears indication for forelock over top of mane. Similar to Sf 822.
(Figure 12.8)

Special find no: 822 Trench: Ch. VIII Context: 1003
Period: V Weight: 22.2g
Material: Dimensions: 4.4 x 3.3 x 1.5 cm
Description: Neck and mane of horse. Mane is of pinched clay with no appliqué or incised markings, however it is possible to see where the ears once would have been. There are two small holes at the top of the head just in front of ears following the angle of the neck.

Special find no: 1074 Trench: Ch. IX Context: 1035
Period: VI Weight: 85.6g
Material: Dimensions: 7.0 x 7.0 x 2.7 cm
Description: Head, arched neck and mane of horse. Mane is of pinched clay and smoothed with appliqué or incised markings, however missing one ear. The head has eyes indicated by two concentric circles on each side of the head with holes for the bit just behind the mouth

and nostrils. On the forehead, centred just in front of the ears, are two concentric circles the same size as the eyes.

Special find no: **1088** Trench: **Ch. VIII** Context: **1067**
Period: **V** Weight: **15.6g**
Material: **Terracotta** Dimensions: **3.0 x 4.0 x 2.0 cm**
Description: **Pinched and smoothed neck, mane, body and base of tale of horse missing lower portions of legs. Body is slipped in dark brown with no indication of saddle or tack. Neck has been centrally pierce from side to side.**

Special find no: **815** Trench: **Ch. VIII** Context: **1003**
Period: **V** Weight: **17.9g**
Material: **Terracotta** Dimensions: **4.0 x 3.1 x 2.8 cm**
Description: **Horse neck with appliqué and incised mane.**

Special find no: **601** Trench: **Ch. VIII** Context: **1000**
Period: **VI** Weight: **59.6g**
Material: **Terracotta** Dimensions: **6.2 x 4.5 x 3.8 cm**
Description: **Horse head and neck with appliqué bridle and circular decorations centrally located running the length of the head (forehead to nose). The snout is pierced through side to side between the eye and bridle.**
(Plate 12.6)

Special find no: **895** Trench: **Ch. VIII** Context: **1001**
Period: **V** Weight: **32.4g**
Material: **Terracotta** Dimensions: **6.2 x 4.5 x 3.8 cm**
Description: **Horse head, neck, pinched mane and body missing all four legs. Pierced through side to side at the head and under the tail. Vertical stamp marks (U <) on right rear hind quarter.**
(Plate 12.6)

12.3.8 Monkeys

Special find no: **270** Trench: **Ch. VI** Context: **45**
Period: **V** Weight: **47.5g**
Material: **Terracotta** Dimensions: **5.1 x 4.7 x 2.6cm**
Description: **'Seated' monkey ('monkey with back rest' according to Dani) with splayed legs; missing legs, arms head and tail.**

Special find no: **666** Trench: **Ch. VIII** Context: **1003**
Period: **V** Weight: **73.8g**
Material: **Terracotta** Dimensions: **7.4 x 4.7 x 2.4cm**
Description: **Monkey seated on extended legs. Missing arms and legs. Possibly painted white?**
(Plate 12.7)
(Figure 12.11)

Special find no: **789** Trench: **Ch. VIII** Context: **1000**
Period: **VI** Weight: **32.9g**
Material: **Terracotta** Dimensions: **2.4 x 4.2 x 4.7cm**
Description: **'Seated' monkey buttocks with lower portion of torso and upper portion of splayed legs.**

Special find no: **1020** Trench: **Ch. VIII** Context: **1019**
Period: **V** Weight: **45.0g**
Material: **Terracotta** Dimensions: **6.4 x 4.9 x 2.5cm**
Description: **'Seated' monkey ('monkey with back rest' according to Dani) with splayed legs and missing right arm and tail/buttocks. Decoration is a band of incised holes around the body at chest height and a second band at the knee level.**
(Plate 12.7)
(Figure 12.11)

12.3.9 Rams

Special find no: **154** Trench: **Ch. VI** Context: **7**
Period: **VI** Weight: **46.8g**
Material: **Terracotta** Dimensions: **3.5 x 4.3X 3.6cm**
Description: **Head of ram. Missing snout and right horn. Horn curls forward, then curls round to the back. Decoration on horn and forehead. Possible pot handle(?).**

Special find no: **221** Trench: **Ch. VI** Context: **41**
Period: **V** Weight: **13.3g**
Material: **Terracotta** Dimensions: **2.4 x 4.1 x 3.0cm**
Description: **Head of ram missing right ear. Shallow inscribed line on left side (0.2cm long), possible position for the eye.**
(Figure 12.12)

Special find no: **399** Trench: **Ch. VI** Context: **64**
Period: **V** Weight: **105.0g**
Material: **Terracotta** Dimensions: **5.5 x 6.4 x 4.7cm**
Description: **Ram head and torso missing front legs and right side of face. The horns are thick and curl from the top of the head toward the back and end in an upward point just behind the eyes. The snout is pierced through side to side just behind the nostrils.**
(Plate 12.7)
(Figure 12.12)

Special Finds no.**650** Trench: **Ch. VIII** Context: **1006**
Period: **V** Weight: **0.9g**
Material: **Terracotta** Dimensions: **1.2 x 1.6 x 0.7cm**
Description: **Single curved horn, possibly from ram.**

12.3.10 Tiger

Special find no: **269** Trench: **Ch. VI** Context: **39**
Period: **V** Weight: **55.6g**
Material: **Terracotta** Dimensions: **4.4 x 3.6 x 4.1cm**
Description: **Rear portion of tiger body, missing lower portions of both rear legs. Tail can be seen swept to one side on left hind quarter. Inscribed dotted lines on rear of body and legs.**
(Plate 12.7)
(Figure 12.12)

12.3.11 Unidentified animal limbs

Special find no: **46** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **2.9g**
Material: **Terracotta** Dimensions: **2.1 x 1.3 x 1.2cm**
Description: **Unidentifiable animal leg conical in shape.**

Special find no: **55** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **1.7g**
Material: **Terracotta** Dimensions: **1.2 x 1.0 x 1.5cm**
Description: **Unidentifiable animal leg conical in shape.**

Special find no: **75** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **22.5g**
Material: **Terracotta** Dimensions: **4.3 x 2.5 x 2.6cm**
Description: **Unidentifiable animal rear right leg with tail. Conical in shape with rounded end.**

Special find no: **118** Trench: **Ch. VI** Context: **7**
Period: **VI** Weight: **19.4g**
Material: **Terracotta** Dimensions: **4.4 x 2.0 x 2.3cm**
Description: **Unidentifiable animal leg conical in shape with red slip.**

Special find no: **122** Trench: **Ch. VI** Context: **4**
Period: **VI** Weight: **10.4g**
Material: **Terracotta** Dimensions: **3.2 x 1.7 x 1.7cm**
Description: **Unidentifiable animal leg conical in shape with dark red/brown slip.**

Special find no: **129** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **9.2g**
Material: **Terracotta** Dimensions: **3.5 x 2.0 x 2.0cm**
Description: **Unidentifiable animal leg conical in shape with dark red slip.**

Special find no: **143** Trench: **Ch. VI** Context: **6**
Period: **VI** Weight: **9.5g**
Material: **Terracotta** Dimensions: **3.5 x 1.7 x 1.9cm**
Description: **Unidentifiable animal leg conical in shape with trace of red slip.**

Special find no: **192** Trench: **Ch. VI** Context: **7**
Period: **VI** Weight: **23.3g**
Material: **Terracotta** Dimensions: **5.7 x 2.2 x 2.3cm**
Description: **Unidentifiable animal leg conical in shape with dark red slip.**

Special find no: **271** Trench: **Ch. VI** Context: **39**
Period: **V** Weight: **16.5g**
Material: **Terracotta** Dimensions: **4.0 x 2.2 x 2.2cm**
Description: **Unidentifiable animal leg conical in shape with dark red slip.**

Special find no: **289** Trench: **Ch. VI** Context: **54**
Stratigraphic Phase: Weight: **10.3g**
Material: **Terracotta** Dimensions: **3.6 x 1.6 x 2.0cm**
Description: **Unidentifiable animal leg conical in shape.**

Special find no: **291** Trench: **Ch. VI** Context: **54**
Period: **V** Weight: **5.7g**
Material: **Terracotta** Dimensions: **3.2 x 1.6 x 2.0cm**
Description: **Unidentifiable animal leg conical in shape with red/orange slip.**

Special find no: **323** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **7.1g**
Material: **Terracotta** Dimensions: **3.2 x 1.6 x 1.5cm**
Description: **Unidentifiable animal leg conical in shape with pointed end.**

Special find no: **375** Trench: **Ch. VI** Context: **58**
Period: **V** Weight: **23.0g**
Material: **Terracotta** Dimensions: **4.6 x 2.5 x 2.7cm**
Description: **Unidentifiable animal leg conical in shape.**

Special find no: **404** Trench: **Ch. VI** Context: **58**
Period: **V** Weight: **9.4g**
Material: **Terracotta** Dimensions: **3.0 x 2.0 x 2.1cm**
Description: **Unidentifiable animal leg conical in shape with dark red slip.**

Special find no: **405** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **26.4g**
Material: **Terracotta** Dimensions: **3.8 x 2.8 x 3.3cm**
Description: **Unidentifiable animal part (possibly camel or bull hump, or animal leg).**

Special find no: **449** Trench: **Ch. VI** Context: **58**
Period: **V** Weight: **15.4g**
Material: **Terracotta** Dimensions: **3.7 x 2.4 x 1.9cm**
Description: **Unidentifiable animal leg conical in shape with pointed end.**

Special find no: **494** Trench: **Ch. VI** Context: **66**
Period: **III** Weight: **15.7g**
Material: **Terracotta** Dimensions: **3.8 x 2.1 x 2.2cm**
Description: **Unidentifiable animal leg conical in shape with rounded end and dark red sl**

Special find no: **508** Trench: **Ch. VI** Context: **80**
Period: **III** Weight: **7.7g**
Material: **Terracotta** Dimensions: **2.7 x 1.6 x 2.0cm**
Description: **Unidentifiable animal leg conical in shape with rounded end.**

12.3.12 Unidentified animal bodies

Special find no: **72** Trench: **Ch. VI** Context: **7**
Period: **VI** Weight: **140.0g**
Material: **Terracotta** Dimensions: **4.5 x 9.2 x 4.5cm**

Description: **Unidentifiable animal body missing neck and upper torso and left side and lower portions of rear legs. There is a pierced hole (3.5mm) under the remnants of an appliqué tail.**

Special find no: 74 Trench: Ch. III Context: 1
Period: VI Weight: 35.6g
Material: Terracotta Dimensions: 6.0 x 3.0 x 2.4cm
Description: **Unidentifiable animal leg.**

Special find no: 76 Trench: Ch. III Context: 1
Period: VI Weight: 86.4g
Material: Terracotta Dimensions: 5.0 x 3.6 x 5.0cm
Description: **Rear portion of unidentifiable animal body missing left and lower portions of right legs. Centred appliqué tail.**

Special find no: 79 Trench: Ch. III Context: 1
Period: VI Weight: 63.2g
Material: Terracotta Dimensions: 3.2 x 5.5 x 4.0cm
Description: **Rear portion of unidentified animal body missing lower portions of both rear legs. Appliqué tail is missing.**

Special find no: 81 Trench: Ch. III Context: 1
Period: VI Weight: 28.9g
Material: Terracotta Dimensions: 2.7 x 4.0 x 3.5cm
Description: **Unidentifiable animal thigh portion of front leg.**

Special find no: 82 Trench: Ch. VI Context: 7
Period: VI Weight: 200.0g
Material: Terracotta Dimensions: 4.7 x 9.5 x 4.6cm
Description: **Unidentifiable animal body missing neck, front and rear legs.**
(Figure 12.1)

Special find no: 83 Trench: Ch. III Context: 1
Period: VI Weight: 13.3g
Material: Terracotta Dimensions: 3.4 x 3.7 x 2.5cm
Description: **Body of unidentifiable (possibly bull or dog?) animal. Head is rounded with no features.**

Special find no: 92 Trench: Ch. III Context: 1
Period: VI Weight: 60.4g
Material: Terracotta Dimensions: 4.8 x 4.3 x 3.2cm
Description: **Unidentifiable (possibly camel or bull) animal torso from above the legs. Hump at top of neck. Missing face on both sides.**

Special find no: 94 Trench: Ch. VI Context: 7
Period: VI Weight: 140.0g
Material: Terracotta Dimensions: 9.3 x 7.8 x 3.5cm
Description: **Unidentifiable animal rear (possibly elephant?) with complete left leg, tail and back edge portion of blanket or howdah on right side; missing right leg.**

Special find no: 97 Trench: Ch. VI Context: 6
Period: VI Weight: 120.0g
Material: Terracotta Dimensions: 4.7 x 8.5 x 4.2cm
Description: **Unidentifiable animal body missing head, neck, front and rear legs. Possibly bull or horse because of brush pattern at the base of the neck. Body slipped in red.**

Special find no: 98 Trench: Ch. VI Context: 6
Period: VI Weight: 25.5g
Material: Terracotta Dimensions: 3.7 x 5.7 x 2.4cm
Description: **Unidentifiable animal body missing head, neck, tail, and front and rear legs.**

Special find no: 99 Trench: Ch. VI Context: 6
Period: VI Weight: 28.5g
Material: Terracotta Dimensions: 6.3 x 3.2 x 3.6cm
Description: **Unidentifiable animal leg with dark red slip.**

Special find no: 104 Trench: Ch. III Context: 104
Period: III Weight: 120.0g
Material: Terracotta Dimensions: 4.2 x 5.5 x 6.8cm
Description: **Unidentifiable animal portion; from behind the front legs to the rear hind quarters missing tail and lower portion of rear legs. The left side is decorated with two incised parallel horizontal lines following the length of the body with a row of incised points evenly spaced between the two. The right side is decorated in the same manner and has three incribed parallel lines running the length of the leg.**

Special find no: 106 Trench: Ch. VI Context: 7
Period: VI Weight: 65.6g
Material: Terracotta Dimensions: 4.0 x 4.2 x 4.3cm
Description: **Unidentifiable animal rear hind quarters, missing lower portion of back legs; small portion of white paint on the left side.**

Special find no: 121 Trench: Ch. VI Context: 4
Period: VI Weight: 73.8g
Material: Terracotta Dimensions: 3.4 x 7.3 x 4.0cm
Description: **Unidentifiable animal body missing neck, front legs, rear legs and tail. Body slipped in red.**

Special find no: 128 Trench: Ch. VII Context: 1
Period: VI Weight: 60.0g
Material: Terracotta Dimensions: 4.1 x 6.1 x 5.0cm
Description: **Rear portion of unidentifiable animal body, missing both lower rear legs. Incomplete appliqué tail.**

Special find no: 134 Trench: Ch. III Context: 1
Period: VI Weight: 16.0g
Material: Terracotta Dimensions: 3.1 x 3.0 x 2.5cm
Description: **Unidentifiable animal buttocks showing appliqué tail and pierced hole. Missing both rear legs.**

Special find no: 137 Trench: Ch. VI Context: 7
Period: VI Weight: 42.8g
Material: Terracotta Dimensions: 3.4 x 6.0 x 2.8cm
Description: **Body portion of unidentifiable animal, missing head, neck, front left, lower portion of front left and rear legs. Erosion on the body is evident. Lines of indentations start on left hand side of body and carry on over the back and terminate on the right hand side.**

Special find no: 138 Trench: Ch. VI Context: 7
Period: VI Weight: 35.0g
Material: Terracotta Dimensions: 2.8 x 3.8 x 3.7cm
Description: **Rear portion of unidentifiable animal missing most of rear legs highly weathered surface.**

Special find no: 139 Trench: Ch. VI Context: 7
Period: VI Weight: 45.5g
Material: Terracotta Dimensions: 3.8 x 4.7 x 2.9cm
Description: **Rear right side of unidentifiable animal, missing lower right leg. Tail visible.**

Special find no: 142 Trench: Ch. VI Context: 7
Period: VI Weight: 60.8g
Material: Terracotta Dimensions: 4.7 x 4.6 x 4.8cm
Description: **Unidentifiable animal head, possible camel with red slip.**

Special find no: 156 Trench: Ch. VI Context: 7
Period: VI Weight: 57.4g
Material: Terracotta Dimensions: 5.8 x 6.2 x 2.2cm
Description: **Unidentifiable animal torso (horse or bull).**

Special find no: 159 Trench: Ch. VI Context: 7
Period: VI Weight: 8.6g
Material: Terracotta Dimensions: 2.7 x 3.3 x 1.4cm
Description: **Bull head missing horns and snout, lower portion of front left and rear right legs.**

Special find no: 168 Trench: Ch. VI Context: 35
Period: V Weight: 54.2g
Material: Terracotta Dimensions: 3.1 x 5.7 x 3.5cm
Description: **Body of unidentified animal, missing both front and rear legs, tail and head.**

Special find no: 169 Trench: Ch. VI Context: 35
Period: V Weight: 70.8g
Material: Terracotta Dimensions: 6.1 x 3.3 x 3.2cm
Description: **Rear portion of unidentified animal torso, missing all right and lower left leg. Base of appliqué tail also visible.**

Special find no: 170 Trench: Ch. VI Context: 35
Period: V Weight: 22.6g
Material: Terracotta Dimensions: 3.4 x 4.5 x 3.1cm
Description: **Unidentifiable animal body missing both front legs and left rear leg the back has a pinched ridge running its length.**

Special find no: 179 Trench: Ch. VI Context: 7
Period: VI Weight: 5.8g
Material: Terracotta Dimensions: 2.3 x 1.6 x 2.0cm
Description: **Unidentifiable animal snout with pierced nostrils from side to side.**

Special find no: 181 Trench: Ch. VI Context: 7
Period: VI Weight: 15.2g
Material: Terracotta Dimensions: 3.4 x 5.2 x 1.8cm
Description: **Unidentifiable animal limb.**

Special find no: 206 Trench: Ch. VI Context: 42
Period: V Weight: 78.6g
Material: Terracotta Dimensions: 3.8 x 5.1 x 4.4cm
Description: **Rear portion of unidentifiable animal body missing both legs. Also missing portion of top of back.**

Special find no: 218 Trench: Ch. VI Context: 41
Period: V Weight: 97.0g
Material: Terracotta Dimensions: 6.6 x 5.8 x 6.1cm
Description: **Unidentifiable animal buttocks with left leg and tail.**

Special find no: 227 Trench: Ch. III Context: 1
Period: VI Weight: 180.0g
Material: Terracotta Dimensions: 4.8 x 7.8 x 5.2cm
Description: **Unidentifiable animal body, missing lower portions of both front legs and right rear leg, missing all of left rear leg and tail.**

Special find no: 235 Trench: Ch. VI Context: 35
Period: V Weight: 32.2g
Material: Terracotta Dimensions: 4.5 x 2.7 x 4.7cm
Description: **Front portion of unidentifiable animal torso, missing neck and lower portions of both front legs. On front portion of torso, immediately above join in legs, are two offset rows of impressed points encircling what would be the neck.**

Special find no: 240 Trench: Ch. III Context: 1
Period: VI Weight: 55.2g
Material: Terracotta Dimensions: 6.3 x 3.2 x 4.8cm
Description: **Darkened, front portion of unidentifiable animal torso missing neck, all of right and lower portions of front left legs.**

Special find no: 261 Trench: Ch. VI Context: 39
Stratigraphic Phase: Weight: 60.4g
Material: Terracotta Dimensions: 3.9 x 4.3 x 4.4cm
Description: **Rear portion of unidentified animal missing lower portion of legs with heavily eroded underbelly.**

Special find no: 263 Trench: Ch. VI Context: 45
Period: V Weight: 63.8g
Material: Terracotta Dimensions: 7.7 x 4.1 x 2.9cm
Description: **Rear left portion of unidentified animal with complete leg and red slip.**

Special find no: 264 Trench: Ch. III Context: 1
Period: VI Weight: 120.0g

Material: Terracotta Dimensions: 3.9 x 7.3 x 4.6cm
Description: Rear portion of unidentifiable animal body with appliqué tail sweeping from the buttocks to the upper portion of rear left leg; missing all of right rear leg and lower portion of left rear leg. Body slipped in red.

Special find no: 267 Trench: Ch. III Context: 1
Period: VI Weight: 85.0g
Material: Terracotta Dimensions: 6.4 x 4.4 x 3.8cm
Description: Unidentifiable animal torso with complete left front leg, missing neck and right front leg.

Special find no: 268 Trench: Ch. III Context: 1
Period: VI Weight: 11.7g
Material: Terracotta Dimensions: 3.1 x 3.1 x 1.9cm
Description: Unidentifiable animal leg pierced at tip.

Special find no: 279 Trench: Ch. VI Context: 45
Period: V Weight: 74.8g
Material: Terracotta Dimensions: 5.6 x 6.6 x 3.7cm
Description: Unidentifiable animal torso with neck, missing front legs and rear portion of body.

Special find no: 287 Trench: Ch. VI Context: 45
Period: V Weight: 41.0g
Material: Terracotta Dimensions: 4.3 x 3.6 x 3.4cm
Description: Unidentifiable rear portion of animal, missing rear right and lower left legs.

Special find no: 308 Trench: Ch. VI Context: 45
Period: V Weight: 190.0g
Material: Terracotta Dimensions: 5.8 x 8.3 x 4.6cm
Description: Unidentifiable animal body, missing neck, and legs.

Special find no: 317 Trench: Ch. III Context: 1
Period: VI Weight: 31.6g
Material: Terracotta Dimensions: 3.5 x 4.6 x 2.3 cm
Description: Rear portion of unidentifiable animal body, missing both rear legs and appliqué tail.

Special find no: 318 Trench: Ch. III Context: 1
Period: VI Weight: 7.7g
Material: Terracotta Dimensions: 2.5 x 2.5 x 1.9 cm
Description: Appliqué hump from camel or bull possibly a leg.

Special find no: 349 Trench: Ch. VI Context: 58
Period: V Weight: 31.7g
Material: Terracotta Dimensions: 3.2 x 3.2 x 4.6cm
Description: Front portion of unidentifiable animal torso missing neck, and legs. Eroded on left hand side of torso.

Special find no: 425 Trench: Ch. III Context: 1
Period: VI Weight: 55.0g
Material: Terracotta Dimensions: 5.23X 3.8 x 3.1cm
Description: Decorated torso of unidentifiable animal with one collar or garland around the neck with impressed circles; the same pattern is repeated on a vertical portion running through the front legs.

Special find no: 486 Trench: Ch. VI Context: 69
Period: V Weight: 120.0g
Material: Terracotta Dimensions: 5.6X 5.7 x 4.7cm
Description: Front portion of unidentifiable animal torso, missing neck, left and right lower leg. Dark slip on right side of torso.

Special find no: 509 Trench: Ch. VI Context: 79
Period: III Weight: 94.6g
Material: Terracotta Dimensions: 6.5 x 5.2 x 3.1cm
Description: Unidentifiable animal torso with base of neck and complete front legs, missing body. The neck is decorated with two appliqué garlands the top one is decorated with impressed points closely spaced, the lower one is also decorated with the same points at double-triple the spacing and includes a possible bell on the left side.

Special find no: 543 Trench: Ch. III Context: 1
Period: VI Weight: 48.3g
Material: Terracotta Dimensions: 6.3 x 4.3 x 3.1cm
Description: Front leg portion of unidentifiable animal, missing left and lower right element of leg.

Special find no: 600 Trench: Ch. VIII Context: 1000
Period: VI Weight: 140.0g
Material: Terracotta Dimensions: 9.3 x 5.3 x 5.5cm
Description: Rear of unidentifiable animal body. Missing most of rear body and lower right leg; possible elephant?
(Figure 12.13)

Special find no: 627 Trench: Ch. VIII Context: 1001
Period: V Weight: 110.0g
Material: Terracotta Dimensions: 4.4 x 7.7 x 3.4cm
Description: Unidentifiable animal body, missing four legs, neck and head.

Special find no: 673 Trench: Ch. VIII Context: 1003
Period: V Weight: 29.9g
Material: Terracotta Dimensions: 5.7 x 1.6 x 2.2cm
Description: Foot and lower portion of figurine probably animal.

Special find no: 706 Trench: Ch. VIII Context: 1007
Period: V Weight: 210.0g
Material: Terracotta Dimensions: 5.0 x 8.5 x 5.4cm
Description: Unidentifiable animal body, missing neck, legs and tail.

Special find no: 788 Trench: Ch. VIII Context: 1000
Period: VI Weight: 95.4g
Material: Terracotta Dimensions: 5.0 x 4.2 x 6.3cm
Description: Unidentifiable animal partially painted with a dark brown slip.

Special find no: 805 Trench: Ch. VIII Context: 1010
Period: V Weight: 67.8g
Material: Terracotta Dimensions: 7.0 x 5.0 x 3.0cm
Description: Unidentifiable animal right rear quarter and upper leg.

Special find no: 816 Trench: Ch. VIII Context: 1003
Period: V Weight: 81.4g
Material: Terracotta Dimensions: 4.5 x 4.2 x 3.6cm
Description: Unidentifiable animal, rear half of animal missing legs.

Special find no: 817 Trench: Ch. VIII Context: 1003
Period: V Weight: 110.0g
Material: Terracotta Dimensions: 7.6 x 4.5 x 3.8cm
Description: Unidentifiable animal body portion, missing front and rear legs. Body slipped in red.

Special find no: 818 Trench: Ch. VIII Context: 1003
Period: V Weight: 74.4g
Material: Terracotta Dimensions: 3.3 x 5.1 x 3.3cm
Description: Unidentifiable animal body portion missing front and rear leg quarters. There is an inscribed line running the length of the body with incised lines on both sides converging to form an inverted 'V'.
(Figure 12.13)

Special find no: 848 Trench: Ch. VIII Context: 1018
Period: V Weight: 155.0g
Material: Terracotta Dimensions: 4.4 x 5.2 x 8.3cm
Description: Unidentifiable animal body portion missing neck and front and rear legs. There is an inscribed line running the length of the body with incised lines on both sides converging to form an inverted 'V'.

Special find no: 922 Trench: Ch. VIII Context: 1021
Period: II Weight: 95.4g
Material: Terracotta Dimensions: 5.8 x 7.9 x 4.0cm
Description: Unidentifiable animal body missing lower legs and neck however, partially painted with a dark brown slip.

Special find no: 1129 Trench: Ch. VIII Context: 1019
Period: V Weight: 74.4g
Material: Terracotta Dimensions: 4.1 x 4.65 x 3.8cm
Description: Unidentifiable animal body missing front quarters and lower half of rear legs. The figure has a coating of red slip.

Special find no: 1130 Trench: Ch. VIII Context: 1018
Period: V Weight: 79.0g
Material: Terracotta Dimensions: 5.4 x 6.3 x 3.8cm
Description: Unidentifiable animal head neck and torso.

Special find no: 1182 Trench: Ch. VIII Context: 1020
Period: V Weight: 75.6g
Material: Terracotta Dimensions: 4.8 x 4.1 x 4.4cm
Description: Unidentifiable animal body, front portion missing as well as rear leg quarters, with dark red slip.

Special find no: 1183 Trench: Ch. VIII Context: 1012
Period: V Weight: 135.0g
Material: Terracotta Dimensions: 5.1 x 6.2 x 4.9cm
Description: Unidentifiable animal neck and torso slipped with dark red with pattern of circles ringing the neck.

Special find no: 1187 Trench: Ch. VIII Context: 1014
Period: V Weight: 61.2g
Material: Terracotta Dimensions: 5.5 x 5.4 x 2.4cm
Description: Unidentifiable animal; right front quarter with lower portion of neck and upper portion of leg slipped in dark red.

Special find no: 1188 Trench: Ch. VIII Context: 1020
Period: V Weight: 77.2g
Material: Terracotta Dimensions: 5.2 x 4.1 x 4.3cm
Description: Unidentifiable animal body front portion missing as well as rear leg quarters with dark red slip.

Special find no: 1195 Trench: Ch. VIII Context: 1018
Period: V Weight: 59.6g
Material: Terracotta Dimensions: 4.4 x 3.9 x 3.5cm
Description: Unidentifiable animal rear portion missing rear leg quarters with signs of burning and a small hole centrally located underneath between the legs.

Special find no: 1197 Trench: Ch. VIII Context: 1010
Period: V Weight: 25.3g
Material: Terracotta Dimensions: 2.3 x 3.2 x 3.1cm
Description: Unidentifiable animal rear portion missing rear leg quarters with signs of burning or over reduced in the kiln.

Special find no: 1203 Trench: Ch. VIII Context: 1006
Period: V Weight: 70.2g
Material: Terracotta Dimensions: 4.9 x 3.6 x 4.1cm
Description: Unidentifiable animal body, front portion missing as well as rear leg quarters.

Special find no: 1210 Trench: Ch. VIII Context: 1014
Period: V Weight: 18.2g
Material: Terracotta Dimensions: 3.8 x 3.0 x 2.0cm
Description: Unidentifiable animal portion of buttocks.

Special find no: 1330 Trench: Surface Context: Surface
Period: VI Weight: 66.2g
Material: Terracotta Dimensions: 5.6 x 2.9 x 4.3 cm

Description: Rear of unidentifiable animal, missing both lower legs. Appliqué tail visible. Unusual bump on under side of the animal.

12.3.13 Carts

Special find no: 78 Trench: Ch. III Context: 1
Period: VI Weight: 37.3g
Material: Terracotta Dimensions: 4.8 x 3.8 x 2.6 cm.
Description: Fragment of pierced cart base with visible pierced channel for axle.

Special find no: 91 Trench: Ch. III Context: 1
Period: VI Weight: 78.2g
Material: Terracotta Dimensions: 6.5 x 6.7 x 3.3cm.
Description: Fragment of pierced cart base with pierced channel for axle and decorated with red slip.

Special find no: 120 Trench: Ch. VI Context: 4
Period: VI Weight: 31.8g
Material: Terracotta Dimensions: 3.6 x 3.4 x 2.7 cm.
Description: Fragment of pierced cart upright decorated with red slip.

Special find no: 126 Trench: Ch. III Context: 1
Period: VI Weight: 15.9g
Material: Terracotta Dimensions: 4.1 x 2.1 x 1.7 cm.
Description: Fragment of pierced cart upright decorated with red slip.

Special find no: 153 Trench: Ch. VI Context: 40
Period: V Weight: 78.6g
Material: Terracotta Dimensions: 7.8 x 5.8 x 2.6 cm.
Description: Fragment of pierced cart base with visible pierced channel for axle and decorated with red slip.

Special find no: 161 Trench: Ch. VI Context: 41
Period: V Weight: 9.8g
Material: Terracotta Dimensions: 3.2 x 1.9 x 1.4 cm.
Description: Fragment of pierced cart upright decorated with impressed lines either side of the piercing.

Special find no: 191 Trench: Ch. VI Context: 35
Period: V Weight: 150.0g
Material: Terracotta Dimensions: 7.8 x 7.3 x 3.6 cm.
Description: Large fragment of pierced cart base with piercing for axle.

Special find no: 283 Trench: Ch. VI Context: 35
Period: V Weight: 60.3g
Material: Terracotta Dimensions: 2.7 x 6.4 x 6.0 cm.
Description: Large fragment of pierced cart base with piercing for axle. Unusual as not rectangular in cross section.

Special find no: 229 Trench: Ch. VI Context: 41
Period: V Weight: 60.0g
Material: Terracotta Dimensions: 5.2 x 5.2 x 2.6 cm.
Description: Fragment of pierced cart base with piercing for axel.

Special find no: 234 Trench: Ch. III Context: 1
Period: VI Weight: 14.3g
Material: Terracotta Dimensions: 2.7 x 2.5 x 1.7 cm.
Description: Fragment of pierced cart upright decorated with red slip.

Special find no: 239 Trench: Ch. III Context: 1
Period: VI Weight: 13.7g
Material: Terracotta Dimensions: 3.6 x 2.4 x 1.5 cm.
Description: Fragment of pierced cart upright decorated with red slip.

Special find no: 336 Trench: Ch. VI Context: 58
Period: V Weight: 27.2g
Material: Terracotta Dimensions: 5.2 x 5.7 x 2.4cm
Description: Fragment of pierced cart upright.

Special find no: 520 Trench: Ch. VI Context: 12
Period: V Weight: 41.4g
Material: Terracotta Dimensions: 7.2 x 2.2 x 2.8cm
Description: Pierced cart upright with broken curved top.

Special find no: 607 Trench: Ch. VIII Context: 1000
Period: VI Weight: 37.5g
Material: Terracotta Dimensions: 7 x 2 x 3cm
Description: Terminal of pierced cart upright.
(Figure 12.14)

Special find no: 643 Trench: Ch. VIII Context: 1001
Period: V Weight: 188.0g
Material: Terracotta Dimensions: 10.1 x 3.9 x 5.3cm
Description: Left hand section of cart with axial groove

Special find no: 768 Trench: Ch. VIII Context: 1012
Period: V Weight: 38.7g
Material: Terracotta Dimensions: 4.9 x 3.2 x 2.3cm
Description: Fragment of pierced cart upright.

Special find no: 787 Trench: Ch. VIII Context: 1000
Period: VI Weight: 25.4g
Material: Terracotta Dimensions: 4.9 x 2.3 x 1.9cm
Description: Fragment of pierced cart upright.

Special find no: 1181 Trench: Ch. VIII Context: 1015
Period: V Weight: 36.8g
Material: Terracotta Dimensions: 3.6 x 2.2 x 1.8cm
Description: Fragment of upright of cart.

Special find no: 1199 Trench: Ch. VIII Context: 1012
Period: V Weight: 94.4g
Material: Terracotta Dimensions: 7.5 x 6.6 x 1.6cm
Description: Cart chassis fragment.
(Plate 12.8)
(Figure 12.14)

Special find no: 1206 Trench: Ch. VIII Context: 1053
Period: V Weight: 55.8g
Material: Terracotta Dimensions: 6.6 x 2.6 x 1.7cm
Description: Fragment of upright of cart.

12.3.14 Bird chariots

Special find no: 894 Trench: Ch. VIII Context: 1010
Period: V Weight: 58.6g
Material: Terracotta Dimensions: 7.1 x 3.8 x 2.4cm
Description: Rear section of bird chariot, with hole running through from side to side. Rear of chariot has tail feathers. The top of the chariot is inscribed with circular markings.
(Plate 12.8)
(Figure 12.14)

12.3.15 Wheels

Special find no: 258 Trench: Ch. IV Context: 1
Period: VI Weight: 18.2g
Material: Terracotta
Dimensions: 1.8 x 4.7 x 2.4 cm.
Description: Half (with the axis) of wheel. Decorated with stamped diamond shape, and areas of dark red slip.
(Figure 12.15)

Special find no: 646 Trench: Ch. VIII Context: 1006
Period: V Weight: 83.2g
Material: Terracotta
Dimensions: Diameter 7.7cm, height 2.4cm, and axial aperture diameter 0.6cm
Description: Complete wheel, one side flat the other with protruding hub.
(Plate 12.8)
(Figure 12.15)

Special find no: 1013 Trench: Ch. IX Context: 1053
Period: V Weight: 25.6g
Material: Terracotta
Dimensions: Diameter 5cm, height 1.8cm, and axial aperture 0.7cm.
Description: Fragmentary wheel, one side flat the other with protruding hub.
(Figure 12.15)

12.4 BEADS

A total of 43 terracotta beads was recovered from the recent excavations at the Bala Hisar of Charsadda, weighing 1231.8g (Table 12.4). Five of these examples were recovered from 'in-situ' archaeological contexts, the remaining 38 having been recovered from the fills of robber pits or washes close to the surface. Individual categories include biconical, beehive, spherical, disc barrel, vase-shaped and unidentifiable fragments. The most abundant category was represented by 15 biconical beads, of which three were recovered from in-situ deposits (Sfs 326, 530 & 1075). The oldest of these, Sf 1075, was recovered from old land surface 1064, which was deposited during phase B of site Period II and dates to between c. 1310 and 1040 BC. It is a large ridged biconical bead with a dark brown slip and four gouged circular marks on its upper hemisphere, each approximately 90 degrees from each other, midway between the top of the bead and the equator. On the lower, undamaged hemisphere there is another circular gouge mark, half way between the equator and the top of the bead. There are also two series of impressed fingernail marks, 90 degrees to one side of the gouge mark. They stretch from the midpoint of the hemisphere to the equator of the bead. Circular decorations are more common on stone beads of this category as well as beehive-shaped examples as illustrated by Wheeler at Charsadda (1962: XXXVIII–XXXIX). Wheeler also records that this type of bead is the earliest at the site having been recovered from the base of trench Ch. I, a factor supported by the evidence from Ch. VIII. Sf 326 was recovered from context 57, one of the fills of Period II ditch cut 61 at the

eastern end of trench Ch. VI. Feature 61 has been interpreted as one of the earliest features assisting to define the eastern edge of the natural clay mound, which underlies the Bala Hisar and has yielded a radiocarbon date of between c. 1270 and 930 BC from its basal fills. Its biconical form has a central inscribed ridge flanked by groups of inscribed zigzag lines on both sides of the ridge. The third and final in-situ bead of this category, Sf 530, was recovered from the fill of ditch cut 2 in trench Ch. III. Attributed dates of between c. 770 and 370 BC, this fragmentary object belongs within site Period III and may have been redeposited. The antiquity of this category is also supported by close affinities with assemblages within the northern valleys although Stacul identified them as spindle-whorls rather than beads (Stacul 1995: 122). Our second category of bead is represented by what Wheeler has termed 'asymmetrical beehive-shaped' and dated to levels after the use of 'Rippled Rim' ceramic forms (1962: 116). During our fieldwork at the Bala Hisar we recovered thirteen examples, two of which were found in in-situ deposits (Sfs 597 & 1051). The earliest of the two, Sf 1051, was also recovered from old land surface 1064, which dates to between c. 1040 and 1310 BC. Although a number of stone types are decorated, Sf 1051 is entirely plain. The second in-situ example is Sf 597, which was also recovered from context 32 of ditch cut 2. Another undecorated example, it may be dated to between c. 770 and 370 BC. That our two in-situ examples were recovered from the same levels as biconical examples suggests that both are early forms (Stacul 1995: 122). Our other categories are less helpful being out of context, but have been noted at Charsadda and Shaikhan Dheri (1966). It is worth noting that although vase-shaped beads were all from mixed levels at the former site (Wheeler 1962: 118) and spherical, disc barrel and vase-shaped beads were all clustered in post-Hellenistic levels at the latter (Dani 1966: 129).

12.4.1 Biconical beads

Special find no: 140 | Trench: Ch. VI | Context: 7
Period: VI | Weight: 10.6g | Colour: pink/orange
Material: Terracotta | Dimensions: 2.2 x 2.8 cm | Hole Diam: 0.53cm
Description: Pink/grey undecorated biconical bead. Badly damaged.

Special find no: 148 | Trench: Ch. VI | Context: 41
Period: V | Weight: 36.4g | Colour: Pink/orange
Material: Terracotta | Dimensions: 2.8 x 3.8cm | Hole Diam: 1.2cm
Description: Large, undecorated orange ridged biconical bead.

Special find no: 230 | Trench: Ch. III | Context: 1
Period: VI | Weight: 11.2g | Colour: grey
Material: Terracotta | Dimensions: 2.9X 1.7cm | Hole Diam: 0.45cm
Description: Ridged undecorated biconical bead.

Special find no: 273 | Trench: Ch. III | Context: 1
Period: VI | Weight: 11.7g | Colour: brown/light grey
Material: ceramic | Dimensions: 1.5X 3.4cm | Hole Diam: 0.98cm
Description: Undecorated ridged biconical bead.

Special find no: 313 | Trench: Ch. III | Context: 1
Period: VI | Weight: 19.0g | Colour: pink/grey
Material: Terracotta | Dimensions: 3.1X 3.7cm | Hole Diam: 1.0cm
Description: Half (along axis) spherical bead with biconical trend with diagonal striations alternating round the equator of the bead.
(Plate 12.9)
(Figure 12.16)

Special find no: 315 | Trench: Ch. VI | Context: 54
Period: V | Weight: 19.0g | Colour: pink/red
Material: Terracotta | Dimensions: 2.8 x 3.0cm | Hole Diam: 0.40cm
Description: Ridged biconc with worn off surfaces.
(Figure 12.16)

Special find no: 326 | Trench: Ch. VI | Context: 57
Period: II | Weight: 17.4g | Colour: pink/grey
Material: Terracotta | Dimensions: 4.0 x 3.3cm | Hole Diam: 1.05cm
Description: Half (along axis) biconical with central inscribed ridge flanked by groups of inscribed zigzag lines on both sides of the ridge.
(Plate 12.9)
(Figure 12.16)

Special find no: 530 | Trench: Ch. III | Context: 32
Period: III | Weight: 5.7g | Colour: orange/grey
Material: Terracotta | Dimensions: 1.2 x 2.7cm | Hole Diam: 0.29cm
Description: Very top of biconical bead, preserved part is undecorated.

Special find no: 549 | Trench: Ch. VI | Context: 7
Period: VI | Weight: 9.2g | Colour: black (burnished)
Material: Terracotta | Dimensions: 2.3X 3.1cm | Hole Diam: 1.15cm
Description: Undecorated burnished truncated biconical.

Special find no: 616 | Trench: Ch. VIII | Context: 1000
Period: VI | Weight: 20.8g | Colour: orange/red
Material: Terracotta | Dimensions: 2.3 x 3.4cm | Hole Diam: 1.36cm
Description: Undecorated truncated, ridged biconical bead. Bead coloured in dark red slip.
(Figure 12.16)

Special find no: 654 | Trench: Ch. VIII | Context: 1006
Period: V | Weight: 13.4g | Colour: light brown
Material: Terracotta | Dimensions: 2.0 x 2.6cm | Hole Diam: 0.54cm
Description: Undecorated bead with large ridge and concave biconical design. Bead has patchy remains of dark brown slip on surface.

Special find no: 836 | Trench: Ch. VIII | Context: 1017
Period: V | Weight: 2.2g | Colour: orange/red
Material: Terracotta | Dimensions: 1.2 x 2.1cm | Hole Diam: 0.37cm
Description: Top hemisphere of truncated, biconical bead. Around ridge are four, closely packed concentric circles. About one third of this bead fragment is missing.

Special find no: 1075 | Trench: Ch. VIII | Context: 1064
Period: II | Weight: 45.5g | Colour: orange/brown
Material: Terracotta | Dimensions: 3.5X 4.1cm | Hole Diam: 1.09cm
Description: Large ridged biconical bead. Damage on one hemisphere of bead. In this hemisphere are four gouged circular marks, each approximately 90 degrees from each other, all midway between the top of the bead and the equator. On the undamaged hemisphere is another circular gouge mark, half way between the equator and the top of the bead. There are also two series of impressed fingernail marks, 90 degrees to one side of the gouge mark. They stretch from the midpoint of the hemisphere to the equator of the bead. The series are 1.5cm and 1.1cm long (working from the midpoint to the equator). The bead has a dark brown slip covering it
(Plate 12.9)
(Figure 12.16)

Special find no: 1086 | Trench: Ch. VIII | Context: 1018
Period: V | Weight: 20.5g | Colour: brown/orange
Material: Terracotta | Dimensions: 2.6 x 3.2cm | Hole Diam: 0.98cm
Description: Undecorated, truncated biconical bead.

Special find no: 1191 | Trench: Ch. VIII | Context: 1015
Period: V | Weight: 9.5g | Colour: orange/brown
Material: Terracotta | Dimensions: 2.1 x 2.3cm | Hole Diam: 0.36cm
Description: Undecorated, and damaged, biconical bead.

12.4.2 Beehive-shaped or short convex beads

Special find no: 1 | Trench: Ch. III | Context: 1
Period: VI | Weight: 8.6g | Colour: Dark Grey
Material: Terracotta | Dimensions: 2.5 x 1.5 | Hole Diam: 0.3 cm
Description: Dark grey, short convex, or beehive-shaped bead with incised circle on flat side. Indication of dark brown slip.

Special find no: 119 | Trench: Ch. VI | Context: 35
Period: V | Weight: 8.8g | Colour: pink/red
Material: Terracotta | Dimensions: 2.5 x 1.6cm | Hole Diam: 0.38cm
Description: Short convex, or beehive-shaped bead; incised line around axis on convex side.

Special find no: 147 | Trench: Ch. VI | Context: 40
Period: V | Weight: 24.7g | Colour: Grey
Material: Terracotta | Dimensions: 3.3 x 2.3cm | Hole Diam: 0.45cm
Description: Light grey, short convex, or beehive-shaped bead. Partial and piercing does not pass through from side to side.

Special find no: 272 | Trench: Ch. VI | Context: 39
Period: V | Weight: 16.2g | Colour: brown/orange
Material: ceramic | Dimensions: 2.8 x 3.8cm | Hole Diam: 1.17cm
Description: Half (along axis) short convex, or beehive-shaped bead with diagonal striations alternating around the equator of the bead (retaining traces of white filling?).

Special find no: 312 | Trench: Ch. III | Context: 1
Period: VI | Weight: 4.8g | Colour: reddish
Material: Terracotta | Dimensions: 1.4 x 1.8cm | Hole Diam: 0.5cm
Description: Dani refers to this as 'short convex cone' and Wheeler as 'type iii beehive-shaped' bead.

Special find no: 370 | Trench: Ch. VI | Context: 58
Period: V | Weight: 8.8g | Colour: grey
Material: Ceramic | Dimensions: 1.6 x 2.5cm | Hole Diam: 0.38cm
Description: Short convex, or beehive-shaped bead with symmetrically inscribed line on base. Also striations noticeable on sides.

Special find no: 407 | Trench: Ch. III | Context: 1
Period: VI | Weight: 6.0g | Colour: grey/brown
Material: Terracotta | Dimensions: 1.5 x 2.6cm | Hole Diam: 0.19cm
Description: Half (around axis) short convex, or beehive-shaped bead. Circular inscribed line around hole at base.
(Plate 12.9)
(Figure 12.17)

Special find no: 550 | Trench: Ch. VI | Context: 7
Period: VI | Weight: 6.8g | Colour: grey/brown
Material: Terracotta | Dimensions: 1.6 x 2.1cm | Hole Diam: 0.37cm
Description: Short convex, or beehive-shaped bead with symmetrically inscribed line on concave base. Circular damage on sides of bead.

Special find no: 551 | Trench: Ch. VI | Context: 7
Period: VI | Weight: 6.8g | Colour: orange/brown
Material: Terracotta | Dimensions: 1.6 x 2.2cm | Hole Diam: 0.37cm
Description: Short convex, or beehive-shaped bead with symmetrically inscribed line on base around hole. Damage has occurred to convex side of bead.

Special Finds No.: 597 | Trench No.: VI | Context: 32
Period: III | Weight: 15g | Colour: grey/brown
Material: Terracotta | Dimensions: 2.7 x 2.7 x 1.5cm | Hole Diam: 0.37cm
Description: Short convex, or beehive-shaped bead.

Special find no: 604 | Trench: Ch. VIII | Context: 1000
Colour: grey/brown | Weight: 7.9g | Colour: brown/orange
Period: VI | Dimensions: 1.6 x 2.4cm | Hole Diam: 0.49cm
Description: Undecorated short convex, or beehive-shaped bead.

Special find no: 740 | Trench: Ch. VIII | Context: 1014
Period: V | Weight: 5.5g | Colour: Black
Material: Terracotta | Dimensions: 1.4 x 1.9cm | Hole Diam: 0.4 cm
Description: Black burnished short convex, or beehive-shaped bead with incised line containing white fill.
(Figure 12.17)

Special find no: 1051 | Trench: Ch. VIII | Context: 1064
Period: II | Weight: 13.1g | Colour: orange/red
Material: Terracotta | Dimensions: 1.8 x 2.8cm | Hole Diam: 0.84cm
Description: Undecorated short convex, or beehive-shaped bead.

12.4.3 Spherical beads

Special find no: 233 | Trench: Ch. III | Context: 1
Period: VI | Weight: 3.4g | Colour: brown
Material: Terracotta | Dimensions: 1.7 x 2.0 cm | Hole Diam: 0.42cm
Description: Half (through axis) spherical turned bead with inscribed collars at both ends.

Special find no: 252 | Trench: Ch. III | Context: 1
Period: VI | Weight:0.1g | Colour: black/brown
Material: Terracotta | Dimensions: 0.42 x 0.58cm | Hole Diam: 0.09cm
Description: Small spherical bead.

Special find no: 257 | Trench: Ch. III | Context: 1
Period: VI | Weight: 9.4g | Colour: red/grey
Material: Terracotta | Dimensions: 2.7 x 3.0cm | Hole Diam: 0.6cm
Description: Half (along axis) spherical undecorated bead.

Special find no: 606 | Trench: Ch. VIII | Context: 1000
Period: VI | Weight: 8.0g | Colour: light brown
Material: Terracotta | Dimensions: 1.0 x 2.0cm | Hole Diam: 0.42cm
Description: Roughly spherical in shape, with lines of impressed points running perpendicular to the bead's equator.
(Figure 12.17)

Special find no: 725 | Trench: Ch. VIII | Context: 1010
Period: V | Weight: 8.1g | Colour: Black
Material: Terracotta | Dimensions: 1.7 x 2.1cm | Hole Diam: 0.4 cm
Description: Black burnished, roughly spherical with three concentric circles around the equator. At one end, there are two tightly packed concentric circles, and at the other are three tightly packed concentric circles. The ends of the beads are concave.
(Plate 12.10)

12.4.4 Disc barrel beads

Special find no: 176 | Trench: Ch. VI | Context: 7
Period: VI | Weight: 6.5g | Colour: Pinkish red
Material: Terracotta | Dimensions: 2.0 x 1.5cm | Hole Diam: 0.5cm
Description: Pink/grey red, biconvex bead squared against one side. Dani refers to this as 'disk barrel'.

Special find no: 232 | Trench: Ch. III | Context: 1
Period: VI | Weight: 4.9g | Colour: black/orange
Material: Terracotta | Dimensions: 1.2 x 1.9cm | Hole Diam: 0.34cm
Description: Rough, undecorated disk barrel shape of reworked body sherd.
(Figure 12.17)

Special find no: 386 | Trench: Ch. III | Context: 1
Period: VI | Weight: 8.7g | Colour: brown
Material: Terracotta | Dimensions: 2.3X 2.8cm | Hole Diam: 1.03cm
Description: Half (through axis) undecorated disc barrel bead.

Special find no: 663 | Trench: Ch. VIII | Context: 1006
Period: V | Weight: 2.8g | Colour: light brown
Material: Terracotta | Dimensions: 2.0 x 1.1cm | Hole Diam: 0.47cm
Description: Half (?) of undecorated disc barrel (?) bead. At base of half, is attached an oddly fluted material on inside.

Special find no: 1220 | Trench: Ch. VIII | Context: 1006
Period: V | Weight: 10.2g | Colour: orange/pink
Material: Terracotta | Dimensions: 1.9 x 3.4cm | Hole Diam: 1.0cm
Description: Half (along axis) of disc barrel bead. Dark orange slip still visible on main surface and edges.

12.4.5 Vase-shaped beads

Special find no: 664 | Trench: Ch. VIII | Context: 1003
Period: V | Weight: 7.2g | Colour: Dark grey
Material: Terracotta | Dimensions: 1.6 x 2.1cm | Hole Diam: 0.45cm
Description: Biconvex bead with heavy collar at one end. Two concentric circles midway between equator of bead and base of collar. Also concentric circle on vertical wall of collar.

Special find no: 837 | Trench: Ch. VIII | Context: 1017
Period: V | Weight: 3.3g | Colour: orange/brown
Material: Terracotta | Dimensions: 1.2 x 1.6cm | Hole Diam: 0.32cm
Description: Biconvex bead with heavy collar at one end. Two concentric circles midway between equator of bead and base of collar.
(Figure 12.17)

Special find no: 926 | Trench: Ch. IX | Context: 1046
Period: V | Weight: 9.0g | Colour: light brown
Material: Terracotta | Dimensions: 2.0 x 2.4cm | Hole Diam: 0.47cm
Description: Convex cone with heavy collar at one end. Two inscribed concentric lines circle the base of the convex cone. There are also remnants of a brown slip at the base of the collar.

Special find no: 928 | Trench: Ch. IX | Context: 1046
Period: V | Weight: 10.6g | Colour: dark grey
Material: Terracotta | Dimensions: 2.3 x 2.4cm | Hole Diam: 0.32cm
Description: Dark grey, burnished convex cone with heavy collar at one end. There are two concentric lines at the midpoint of the convex cone. On the base of the convex cone are two more concentric circles. One concentric circle lies at the far end of the collar. Wheeler comments that the shape is reminiscent of a vase.
(Plate 12.10)
(Figure 12.17)

12.4.6 Bead fragment

Special Finds No.: 591 | Trench No.: VI | Context: 7
Period: VI | Weight: 10g | Colour: grey/brown
Material: Terracotta | Dimensions: 1.8 x 2.0cm | Hole Diam: 0.5cm
Description: Terracotta bead fragment.

12.5 BANGLES

Thirteen bangle fragments weighing 735g were recovered during our excavations at the Bala Hisar of Charsadda, three of which were decorated and ten of which were undecorated.

12.4.1 Decorated bangles

Special find no: 446 | Trench VI | Context: 1
Period: VI | Weight: 0.5g
Description: Incomplete bangle black/grey.
Dimensions 3% survives; 8.0cm diameter, 0.6cm wide, 0.6cm thick.
Comments: Circular with thumb impressed diamond pattern.
(Figure 12.17)

Special find no: 454 | Trench III | Context: 1
Period: VI | Weight: 0.1g
Description: Incomplete bangle black/grey.
Dimensions 6% survives; 8.0cm diameter, 0.6cm wide, 0.5cm thick.
Comments: Circular shaped cross-section with repeated impressed pattern of angled lines running across the outside width.
(Figure 12.17)

Special find no: 659 | Trench VIII | Context: 1006
Period: V | Weight: 1.4g
Description: Incomplete bangle black/grey.
Dimensions 11%survives; 5.0cm diameter, 0.5cm wide, 0.5cm thick.
Comments: Flattened circular cross-section with angular striations on curved outside rim.

12.4.1 Undecorated bangles

Special find no: 51 | Trench III | Context: 1
Period: VI | Weight: 0.4g
Description: Incomplete bangle of pink/grey.
Dimensions 5% survives; 7cm diameter, 0.4cm wide, 0.5cm thick.
Comments: Squared cross-section

Special find no: 277 | Trench III | Context: 1
Period: VI | Weight: 0.4g
Description: Incomplete bangle black/grey.
Dimensions 2% survives; 8.0cm diameter, 0.6cm wide, 0.5cm thick.
Comments: Flattened D shaped cross-section

Special find no: 330 | Trench III | Context: 1
Period: VI | Weight: 0.7g
Description: Incomplete bangle black/grey.
Dimensions 8% survives; 5.0cm diameter, 0.5cm wide, 0.5cm thick.
Comments: Circular shaped cross-section.
(Figure 12.17)

Special find no: 340 | Trench III | Context: 1
Period: VI | Weight: 0.8g
Description: Incomplete bangle of light grey with black slip pigment across inside surface.
Dimensions 5% survives; 8.0cm diameter, 0.6cm wide, 0.5cm thick.
Comments: Flattened D-shaped cross-section

Special find no: 427 Trench III Context: 1
Period: VI Weight: 0.3g
Description: Incomplete bangle black/grey.
Dimensions 2% survives; 7.0cm diameter, 0.5cm wide, 0.5cm thick.
Comments: Circular shaped cross-section

Special find no: 461 Trench III Context: 1
Period: VI Weight: 0.8g
Description: Incomplete bangle red body with brown slip.
Dimensions 6% survives; 8.0cm diameter, 0.6cm wide, 0.6cm thick.
Comments: D-shaped cross-section

Special find no: 547 Trench III Context: 1
Period: VI Weight: 0.4g
Description: Incomplete bangle of red/pink colour.
Dimensions 3% survives; 7 diameter, 0.5cm wide, 0.4cm thick.
Comments: Circular with flattened sides in cross-section

Special find no: 548 Trench III Context: 1
Period: VI Weight: 0.3g
Description: Incomplete bangle of red/pink colour.
Dimensions 2% survives; 7.0cm diameter, 0.5cm wide, 0.5cm thick.
Comments: Circular shaped cross-section.

Special find no: 559 Trench III Context: 1
Period: VI Weight: 0.7g
Description: Incomplete bangle black/grey.
Dimensions 11% survives; 5.0cm diameter, 0.5cm wide, 0.5cm thick.
Comments: Circular shaped cross-section

Special find no: 632 Trench VIII Context: 1001
Period: V Weight: 0.7g
Description: Incomplete bangle black/grey.
Dimensions Fragment, 0.6cm wide, 0.6cm thick.
Comments: Circular shaped cross-section highly polished.

12.6 PYRAMIDAL WEIGHTS

A total of 10 pyramidal weights were also recovered, all from mixed contexts. Examples were also found from Wheeler's excavations at Charsadda and Dani's at Shaikhan Dheri, but their function is not entirely clear as Wheeler suggests that they are too light for loom-weights (1962: 114) and Dani that they were hung on a balance (1966: 116). It is notable that similar examples were not recovered from Balambat (Dani 1967) or Taxila (Marshall 1951; Sharif 1969). Wheeler dated them to between the 3rd and 2nd centuries BC (Wheeler 1962: 115).

Special find no: 13 Trench: Ch. III Context: 1
Period: VI Weight: 69.8g
Material: Terracotta Dimensions: 6.3 x 3.2 x 3.1cms
Description: Square sectioned pyramidal weight. Chipped on the top portion.

Special find no: 14 Trench: Ch. III Context: 1
Period: VI Weight: 63.0g
Material: Terracotta Dimensions: 5.5 x 3.3 x 3.6cm
Description: Complete square sectioned pyramidal weight. Piercing at top does not go through to the other side.

Special find no: 177 Trench: Ch. VI Context: 7
Period: VI Weight: 69.6g
Material: Terracotta Dimensions: 6.2 x 3.4 x 3.0cm
Description: Fragmentary square sectioned pyramidal weight, missing top section from bottom of hole

Special find no: 178 Trench: Ch. VI Context: 7
Period: VI Weight: 55.0g
Material: Terracotta Dimensions: 5.8 x 3.3 x 3.0cm
Description: Complete square sectioned pyramidal weight, pierced at top.

Special find no: 202 Trench: Ch. VI Context: 35
Period: V Weight: 34.7g
Material: Terracotta Dimensions: 4.8 x 2.9 x 2.4cm
Description: Fragmentary square sectioned pyramidal weight, missing top portion from above hole. Heavily weathered on two sides.

Special find no: 487 Trench: Surface Context:
Period: VI Weight: 83.6g
Material: Terracotta Dimensions: 7.3 x 3.2 x 3.3cm
Description: Fragmentary square sectioned pyramidal weight, pierced at top. Missing one corner on the base.

Special find no: 652 Trench: Ch. VIII Context: 1003
Period: V Weight: 58.4g
Material: Terracotta Dimensions: 7 x 3.5 x 3cm
Description: Fragmentary square sectioned pyramidal weight, pierced at top.
(Figure 12.8)

Special find no: 687 Trench: Ch. VIII Context: 1003
Period: V Weight: 95.2g
Material: Terracotta. Dimensions: 6.0 x 4.0 x 3.0cm
Description: Square sectioned pyramidal weight, pierced at top.
(Plate 12.10)
(Figure 12.8)

Special find no: 738 Trench: Ch. VIII Context: 1003
Period: V Weight: 120g
Material: Terracotta. Dimensions: 7.0 x 3.5 x 3cm
Description: Complete square sectioned pyramidal weight, pierced at top.
(Figure 12.8)

Special find no: 1204 Trench: Ch.VIII Context: 1010
Period: V Weight: 58.6g
Material: Terracotta. Dimensions: 5.0 x 2.2cm
Description: Fragmentary square sectioned pyramidal weight, pierced at top.

12.7 SHAPED OBJECTS

Two shaped terracotta objects, probably redeposited, were recovered from site Period VI, representing the final stage of deposition at the site. The function of these objects is unclear but it is possible that Sf 165 may have been part of a human figurine, cart or mould.

Special find no: 116 Trench: Ch. VI Context: 35
Period: VI Weight: 7.7g
Material: Terracotta Dimensions: 2.2 x 2.0 x 1.9cm
Description: Diamond shaped with rounded faceted edges.
(Figure 12.19)

Special find no: 165 Trench: Ch. III Context: 1
Period: VI Weight: 21.0g
Material: Terracotta Dimensions: 1.4 x 3.5 x 3.4cm
Description: Fragment of flat bicouvex shape with impressed circle at truncate end with two inscribed lines following the curvature of the edge.
(Plate 12.10)
(Figure 12.19)

12.8 STAMPS

Sf 300 was recovered from Period V, the fills of robber pits, and is probably redeposited. It is cylindrical and has been identified as a stamp on account of the incised pattern, which appears to form a crude rosette.

Special find no: 300 Trench: Ch. VI Context: 42
Period: V Weight: 19.2g
Material: Terracotta Dimensions: 4.9 x 1.9 x 1.8cm
Description: Cylindrical object of burnished terracotta with slight taper toward fractured end and incised lines at edge of the opposite end (possible rosette stamp).
(Plate 12.11)

12.9 VESSEL MOULDS

We also recovered a single fragment of a terracotta mould from the robber pits of site Period V. It was used to mould the base of ceramic vessels and other examples are known from Sirkap from stratum II as well as from the Dharmarajika complex (Marshall 1951: 435–436).

Special Finds no: 130 Trench: Ch. VI Context: 7
Period: VI Weight: 44.4g
Material: Terracotta Dimensions: 6.4 x 4 x 0.9cm
Description: Base fragment of decorated vessel mould. Decorations include star, circle and plant motifs.
(Plate 12.11)
(Figure 12.19)

12.10 BALLS

A single terracotta ball, Sf 293, was recovered from the robber pits of site Period V. Dani has identified such objects as possible sling shots (1966: 128–130).

Special find no: 293 Trench: Ch. VI Context: 54
Period: V Weight: 1.2g
Material: Terracotta Dimensions: 1.1 x 1.1
Description: Sphere; possibly a sling shot.

12.11 EAR REELS OR GAME PIECES

Five objects belonging to this broad category were recovered from the two final stages of deposition at the Bala Hisar. Undecorated object Sf 821 has a fairly common shape and size has clear analogies with similar objects in glass from the Bhir Mound at Taxila (Marshall 1951: 690) and a variety of sites in both North and South India, dating from Mauryan times to the end of the Satavahana period (Dikshit 1969: 15–17) and stretching as far south as Anuradhapura (Coningham 2006). Stacul has recovered a

similar shaped object from Swat Period IV at Kalakoderay (1700–1400 BC), although it has an incised decoration on both faces (Stacul 1997: 371). If Stacul's object is a decorated ear reel, it would suggest that individuals wore some ornaments extremely similar to those decorating the famous category of 'Baroque Ladies'. Gaur has suggested that such shapes may represent weights at Atranjikhera (Gaur 1983: 421–422). Other examples, such as Sfs 655, 660, 821, 973 & 1325, have a similar shape, whilst Sf 33 may be an ear reel, game piece or even stamp.

Special find no: 33 Trench: Ch. III Context: 1
Period: VI Weight: 6.8g
Material: Terracotta Dimensions: 1.6 x 1.9 x 1.8cm
Description: Cylinder-shaped object with biconcaved sides and point impressed random pattern on one convex end.
(Plate 12.11)
(Figure 12.19)

Special Finds no.655 Trench: Ch. VIII Context: 1006
Period: V Weight: 5.2g
Material Terracotta Dimensions: 1.67X 1.56 x 1.62cm
Description: Cylinder-shaped ear reel or game piece/token with biconcaved side.
(Plate 12.11)

Special Finds no.660 Trench: Ch. VIII Context: 1006
Period: V Weight: 1.4g
Material: Terracotta Dimensions: 1.35 x 0.85 x 0.74cm
Description: Cylinder shaped ear reel or game piece/token with biconcaved side.
(Figure 12.19)

Special Finds no.821 Trench: Ch. VIII Context: 1003
Period: V Weight: 45.8g
Material: Terracotta Dimensions: 4.2 x 4.6 x 2.0cm
Description: Large disk shaped ear reel or game piece/token with biconcaved side.
(Figure 12.19)

Special Finds no.973 Trench: Ch. VIII Context: 1035
Period: VI Weight: 3.7g
Material: Terracotta Dimensions: 1.5 x 1.5 x 1.5cm
Description: Cylinder shaped ear reel or game piece/token with biconcaved side.
(Figure 12.19)

Special Finds no.1325 Trench: Ch. VI Context: 40
Period: V Weight: 9.7g
Material: Terracotta Dimensions: 2.8 x 2.6 x 1.2cm
Description: Cylinder shaped ear reel or game piece/token with biconcaved side.

12.12 CONCLUSION

Although the main categories of terracotta objects have been described in detail above, the function of certain categories is still somewhat unclear, such as the spindle-whorl, net sinker or bead attribution to objects within Section 12.4. A further, but less explicit, debate concerns the function of the human and animal figurines introduced and described in Sections 12.2 and 12.3. The vast majority of female figurines discovered in archaeological contexts in South Asia have been labelled mother goddesses, regardless of their context, often because of the over-accentuation of their female physiology, which suggests fecundity (Gordon 1937). For example, the corpus of terracotta female figurines recovered by Sir John Marshall at the Bhir Mound was noted for containing 'figurines of a primitive idol... [and] ...votive reliefs representing various male and female deities' (1951: 440), an attribution repeated by Wheeler at Charsadda (1962: 104). The function of terracotta animal figurines has, however, been very different with Marshall clearly allocating them a recreational function as 'animal and other toys' (1951: 440). This secular allocation has been supported by Wheeler and Dani with reference to toy carts and bird chariots (Wheeler 1962: 114; Dani 1966: 108). The presence of such bull figurines in burials of the Gandharan Grave complex, however, has led other scholars to suggest the presence of a bull cult, although the presence of transverse holes through the snout, nose, legs and/ or trunk suggests that they originally ran on wheels and had some material threaded through the holes to pull the figurine (Khan 1973). Terracotta animal figurines have also been recovered from Buddhist cult sites (Coningham 2001), making their exact function even more difficult to ascertain. A number of the species depicted are also represented in the faunal record of the site (Chapter 16), including buffalo, cattle and sheep-goat but although the inhabitants of the site ate deer and pig, these animals were never modelled further complicating issues of function and ideology. These debates notwithstanding, the corpus of in-situ terracotta objects from the Bala Hisar of Charsadda clearly demonstrate a close cultural link between the basal levels of the mound and a number of the sites in the Swat and Dir Valleys to the north. These issues will be further developed in Chapter 17.

	PERIODS	II	III	IV	V	VI	Totals
Human figurines	no.		1	1	17	17	36
	wt. (g)		*47.8*	*24.8*	*683.2*	*624.5*	*1380.3*
Animal figurines	no.	1	4		83	75	163
	wt. (g)	*95.4*	*238*		*5497.7*	*4079.1*	*9910.2*
Beads	no.	3	2		18	20	43
	wt. (g)	*76*	*20.7*		*216.2*	*918.9*	*1231.8*
Bangles	no.				2	11	13
	wt. (g)				*2.1*	*5.4*	*7.5*
Weights	no.				5	5	10
	wt. (g)				*366.9*	*341*	*707.9*
Ear reels	no.				4	1	5
	wt. (g)				*62.1*	*3.7*	*65.8*
Other objects	no.				1	4	5
	wt. (g)				*19.2*	*74.3*	*93.5*
Totals	no.	4	7	1	130	133	275
	wt. (g)	*171.4*	*306.5*	*24.8*	*6847.4*	*6046.9*	*13397*

Table 12.1: Terracotta objects

	PERIODS	II	III	IV	V	VI	Totals
Fiddle-shaped	no.		1		1		2
	wt. (g)		*47.8*		*7.4*		*55.2*
Baroque ladies	no.				1	2	3
	wt. (g)				*60.4*	*88.1*	*148.5*
Baroque earings	no.				1	3	4
	wt. (g)				*5.2*	*14.8*	*20*
Half-figures	no.				3	1	4
	wt. (g)				*133.2*	*51.8*	*185*
Female plaque	no.					1	1
	wt. (g)					*107.6*	*107.6*
Archers	no.					2	2
	wt. (g)					*48.2*	*48.2*
Head with wreath	no.				1		1
	wt. (g)				*36.5*		*36.5*
Pregnant figure	no.				1		1
	wt. (g)				*105*		*105*
Unidentified female	no.			1	5	4	*10*
	wt. (g)			*24.8*	*203.7*	*175.9*	*404.4*
Unidentified male	no.				2	2	4
	wt. (g)				*87.5*	*73.9*	*161.4*
Unidentified	no.				*2*	2	*4*
	wt. (g)				*44.3*	*64.2*	*108.5*
Totals	no.		1	1	17	17	36
	wt. (g)		*47.8*	*24.8*	*683.2*	*624.5*	*1380.3*

Table 12.2: Terracotta human figurines

	PERIOD	II	III	IV	V	VI	Total
Buffaloes	no.				1		1
	wt. (g)				*13.9*		*13.9*
Bulls	no.				6	7	13
	wt. (g)				*141.1*	*517.4*	*658.5*
Camels	no.				2	2	4
	wt. (g)				*81.1*	*73.3*	*154.4*
Cats	no.				1		1
	wt. (g)				*9.7*		*9.7*
Dogs	no.					1	1
	wt. (g)					*69.8*	*69.8*
Elephants	no.				6	2	8
	wt. (g)				*1130.3*	*99.4*	*1229.7*
Horses	no.				8	6	14
	wt. (g)				*286.1*	*511.2*	*797.3*
Monkeys	no.				3	1	4
	wt. (g)				*166.3*	*32.9*	*199.2*
Rams	no.				3	1	4
	wt. (g)				*119.2*	*46.8*	*166*
Tigers	no.				1		1
	wt. (g).				*55.6*		*55.6*
Unidentified limbs	no.		2		6	10	18
	wt. (g)		*23.4*		*80.3*	*132.4*	*236.1*
Unidentified bodies	no.	1	2		31	36	70
	wt. (g)	*95.4*	*214.6*		*2451.3*	*2324.4*	*5085.7*
Carts	no.				12	8	20
	wt. (g)				*795.4*	*253.3*	*1048.7*
Bird chariots	no.				1		1
	wt. (g)				*58.6*		*58.6*
Wheels	no.				2	1	3
	wt. (g)				*108.8*	*18.2*	*127*
Totals	no.	1	4		83	75	163
	wt. (g)	*95.4*	*238*		*5497.7*	*4079.1*	*9910.2*

Table 12.3: Other terracotta figurines

	PERIODS	II	III	IV	V	VI	Totals
Biconical beads	no.	2	1		6	6	15
	wt. (g)	*62.9*	*5.7*		*101*	*827*	*996.6*
Beehive' beads	no.	1	1		5	6	13
	wt. (g)	*13.1*	*15*		*64*	*40.9*	*133*
Spherical beads	no.				2	4	6
	wt. (g)				*11.4*	*20.9*	*32.3*
Disc barrel beads	no.				2	3	5
	wt. (g)				*13*	*20.1*	*33.1*
Vase-shaped beads	no.				3		3
	wt. (g)				*26.8*		*26.8*
Bead fragment	no.					1	1
	wt. (g)					*10*	*10*
Total Beads	no.	3	2		18	20	43
	wt. (g)	*76*	*20.7*		*216.2*	*918.9*	*1231.8*
Bangles	no.				2	11	13
	wt. (g)				*2.1*	*5.4*	*7.5*
Pyramidal weights	no.				5	5	10
	wt. (g)				*366.9*	*341*	*707.9*
Shaped objects	no.					2	2
	wt. (g)					*28.7*	*28.7*
Stamps	no.				1		1
	wt. (g)				*19.2*		*19.2*
Vessel moulds	no.					1	1
	wt. (g)					*44.4*	*44.4*
Balls	no.					1	1
	wt. (g)					*1.2*	*1.2*
Ear reels	no.				4	1	5
	wt. (g)				*62.1*	*3.7*	*65.8*
Totals	no.	3	2		30	41	76
	wt. (g)	*76*	*20.7*		*666.5*	*1337.9*	*2106.5*

Table 12.4: Other terracotta objects

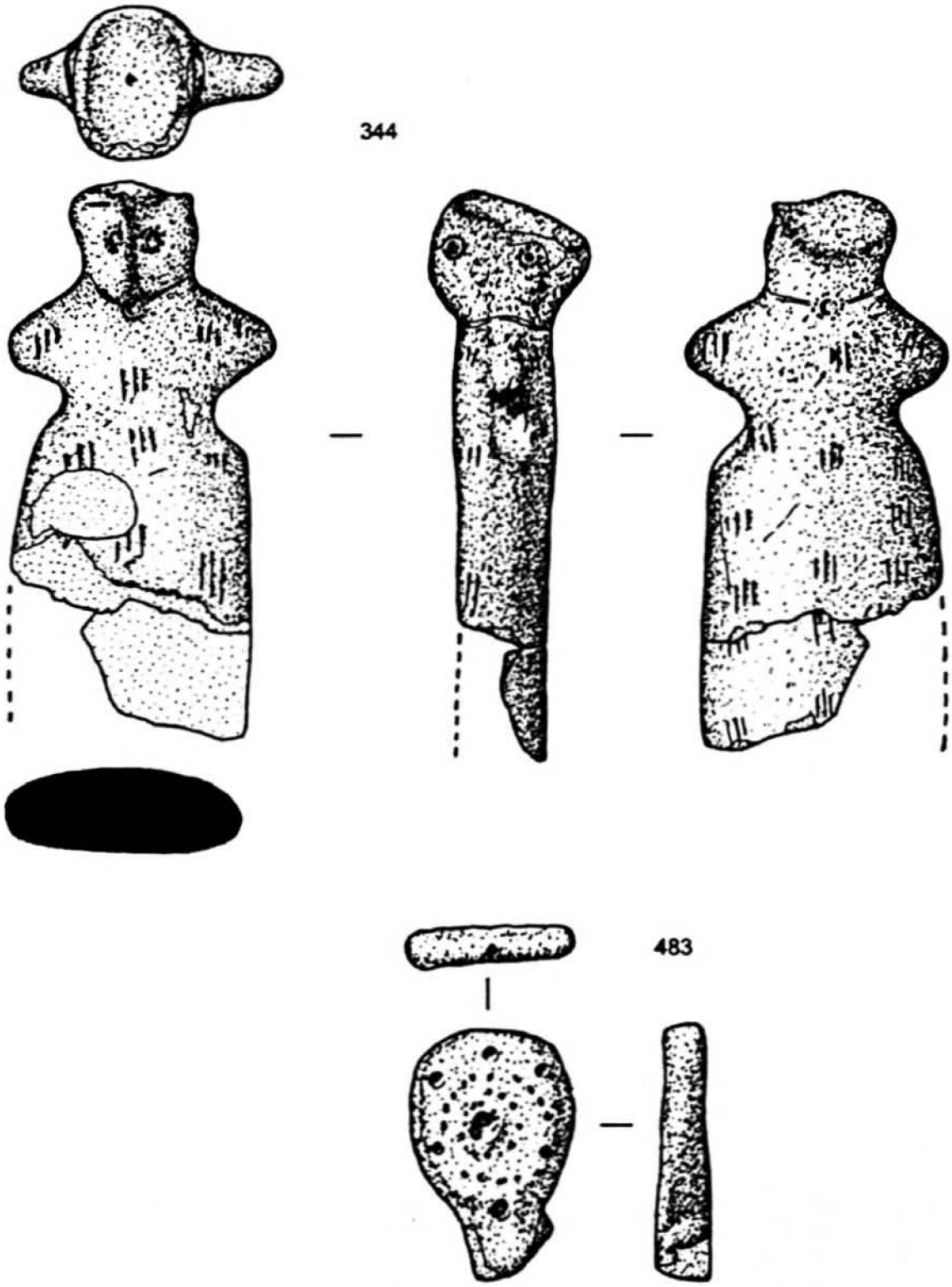


Figure 12.1: Terracotta objects (1:2)
Fiddle-shaped human figurines (Sfs 334 & 483)

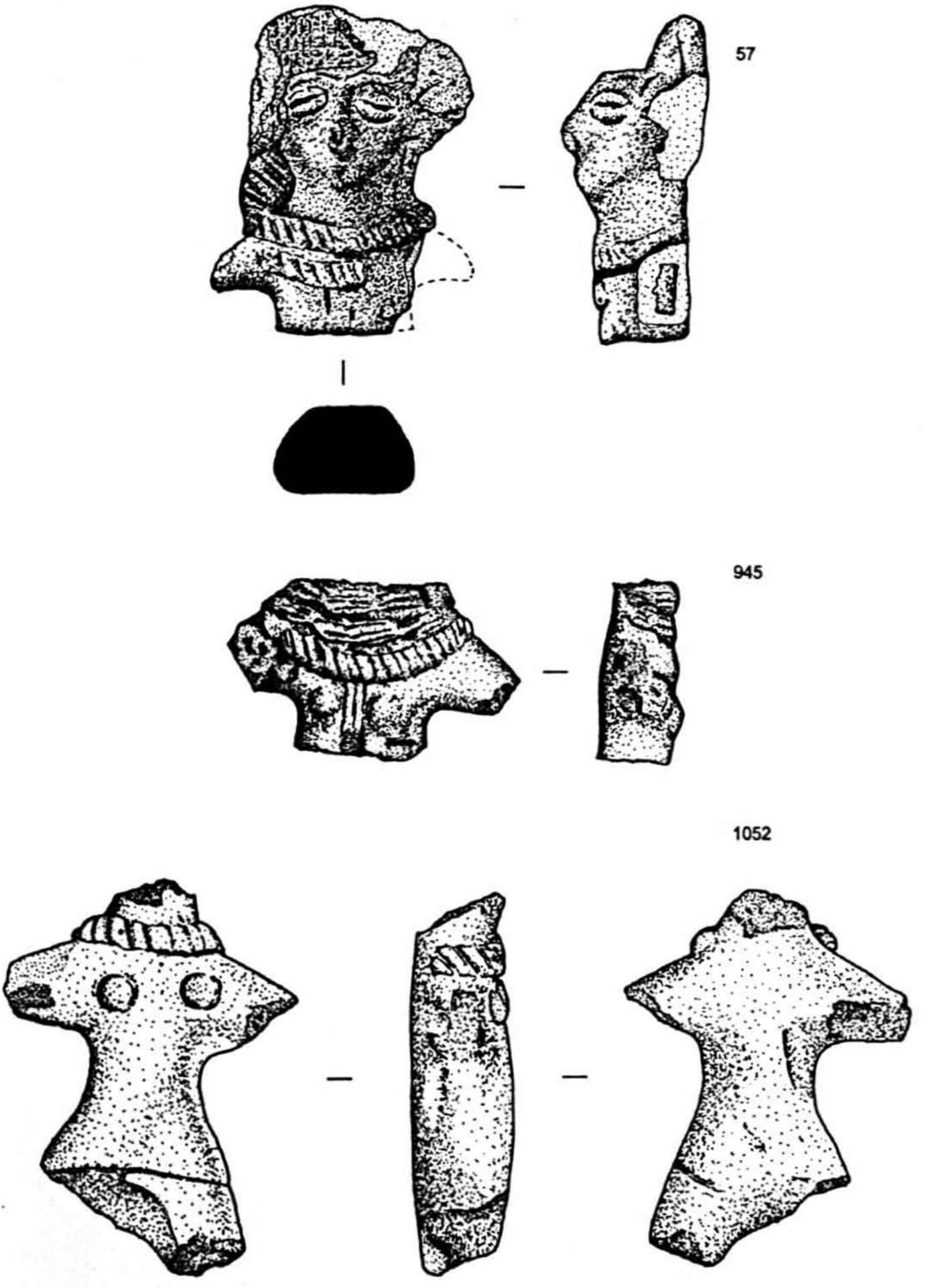


Figure 12.2: Terracotta objects (1:2)
Baroque Ladies (Sfs 57, 945 & 1052)

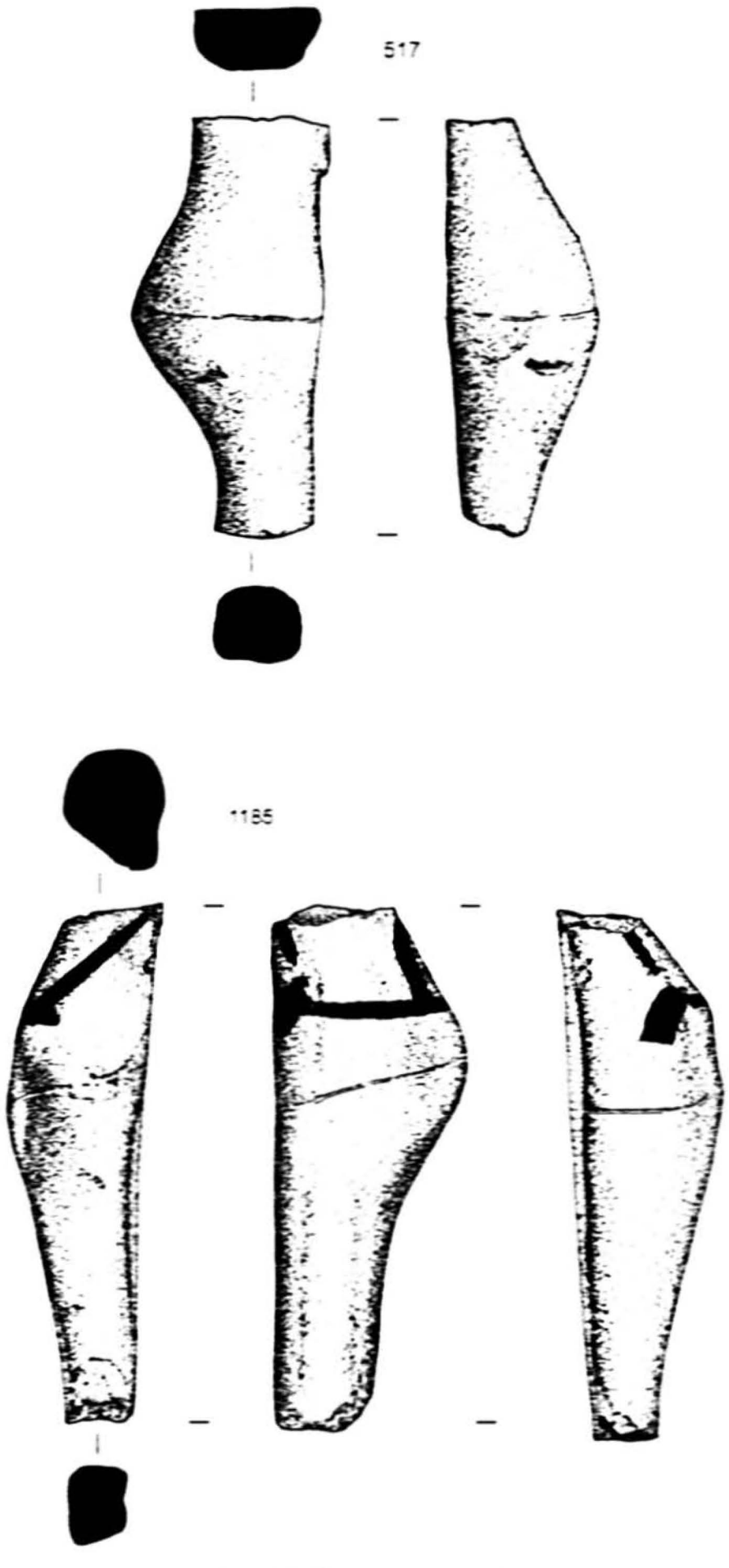


Figure 12.3. Terracotta objects (1:2)
Human leg-figures (Sts 617 & 1185)

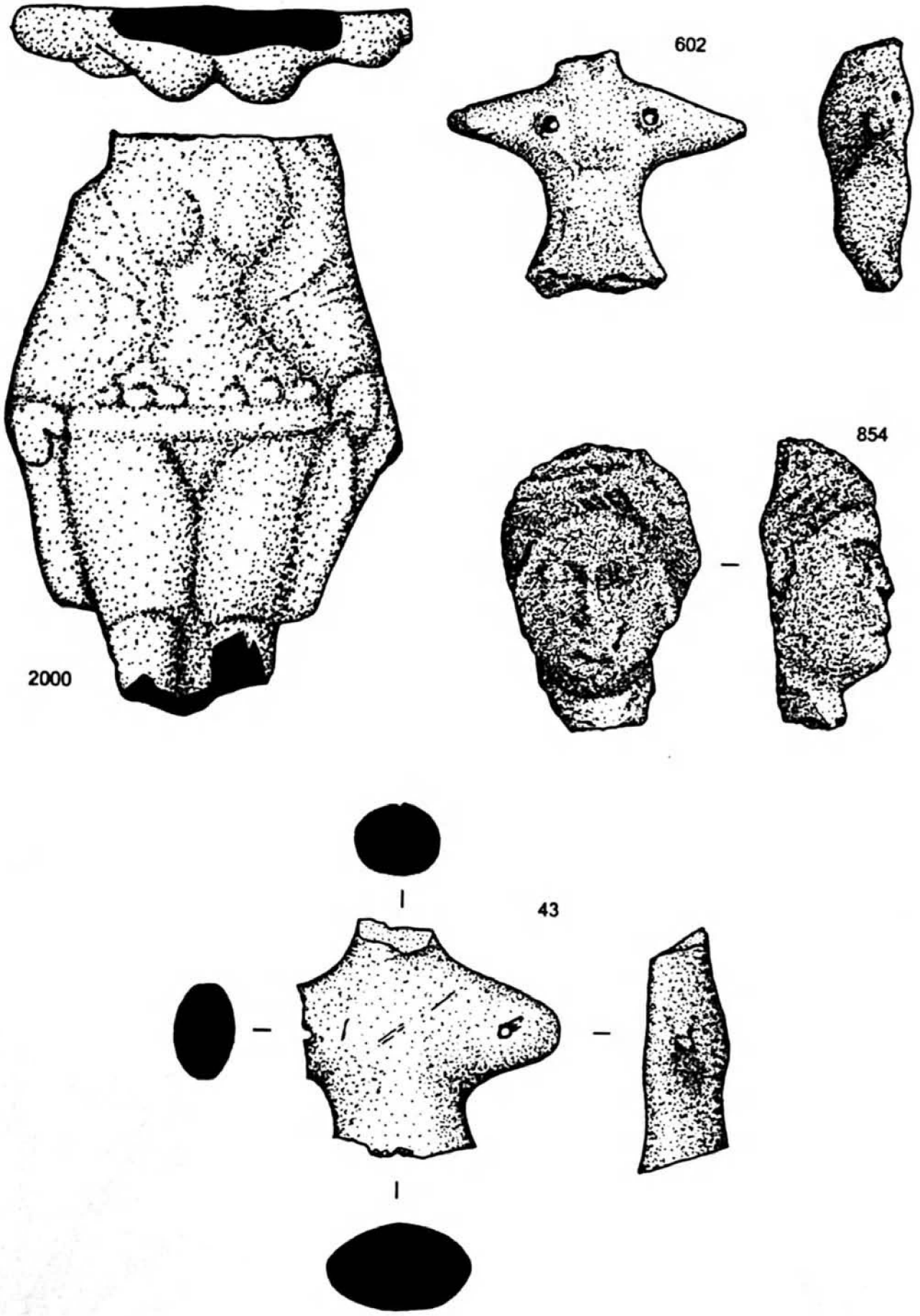


Figure 12.4: Terracotta objects (1:2)
Human female plaque (Sf 2000). Human archer figurines (Sfs 43 & 602). Human head with wreath (Sf 854)

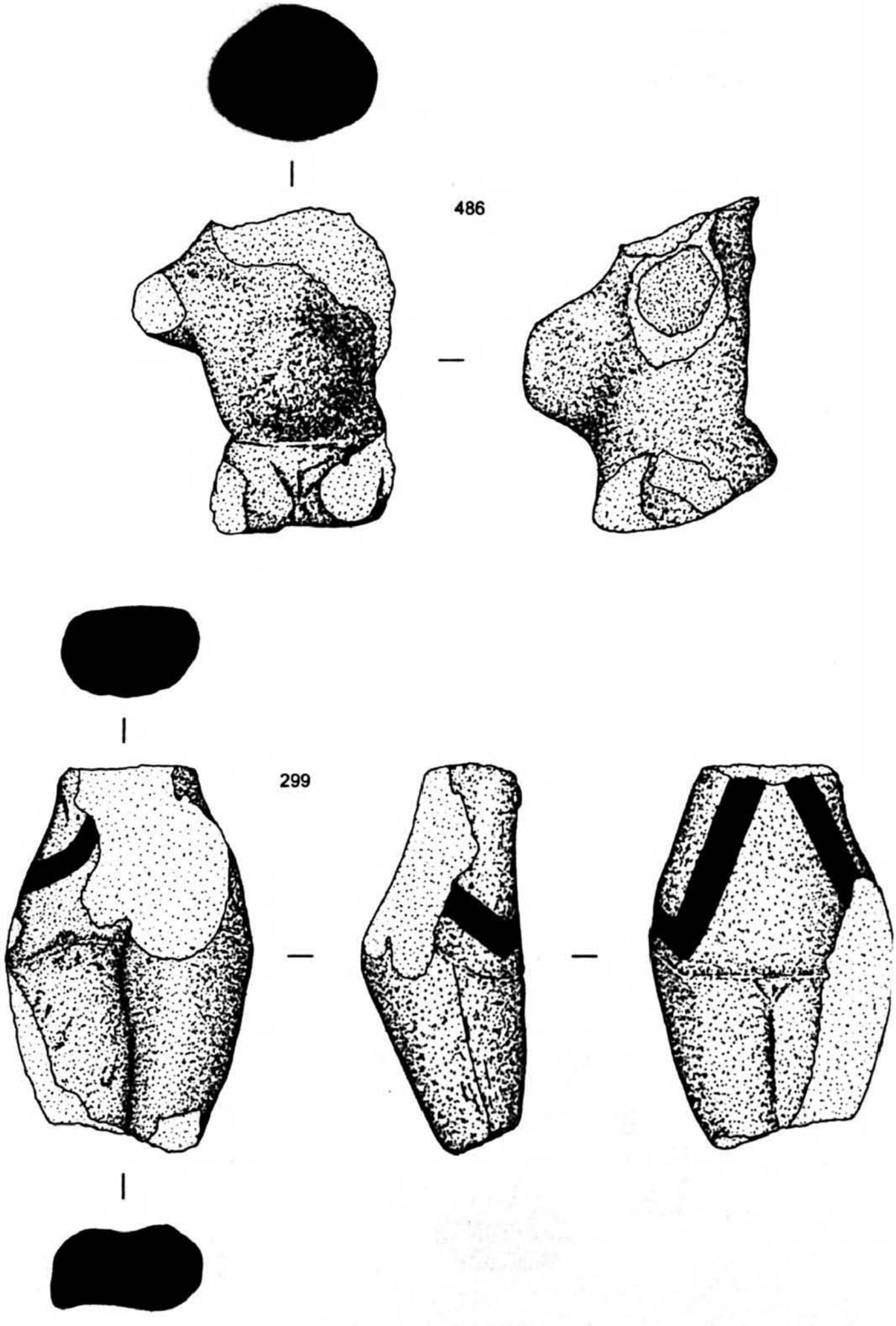


Figure 12.5: Terracotta objects (1:2)
Pregnant human figurine (Sf 486). Unidentified female torso (Sf 299)

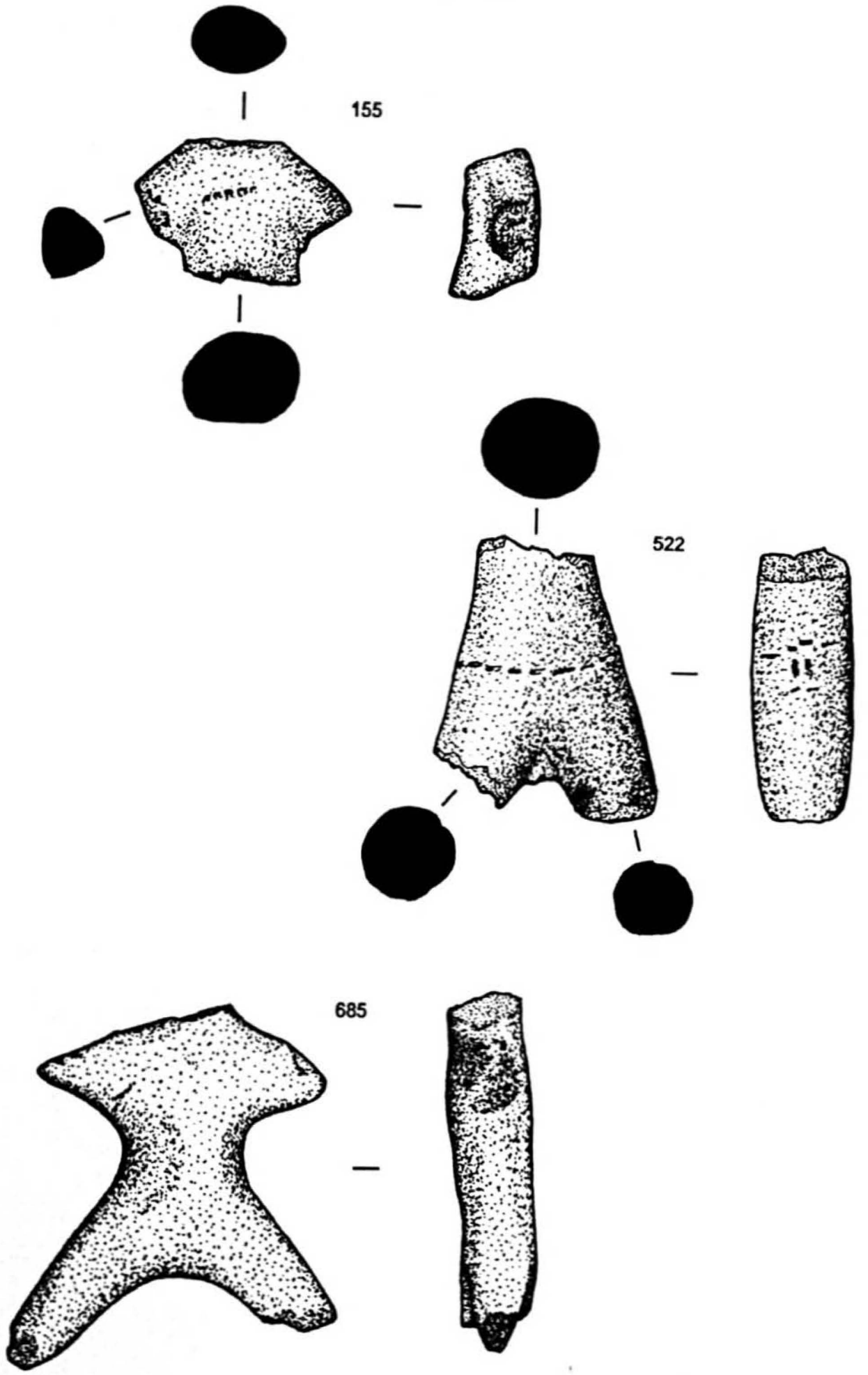


Figure 12.6: Terracotta objects (1:2)
Unidentified male torsos (Sfs 155, 522 & 685)

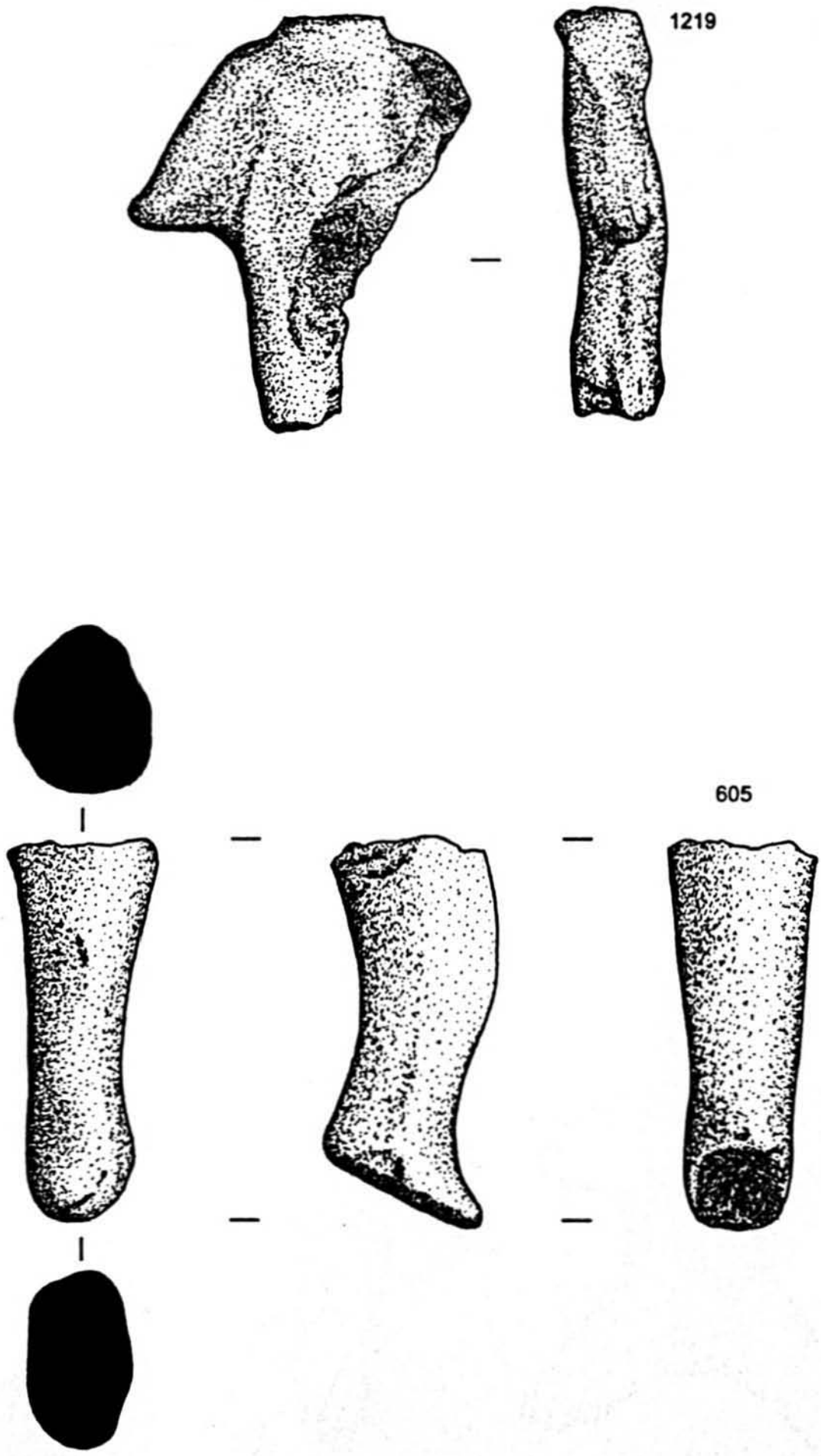


Figure 12.7: Terracotta objects (1:2)
Unidentified male torso (Sf 1219). Possible human leg and foot (Sf 605)

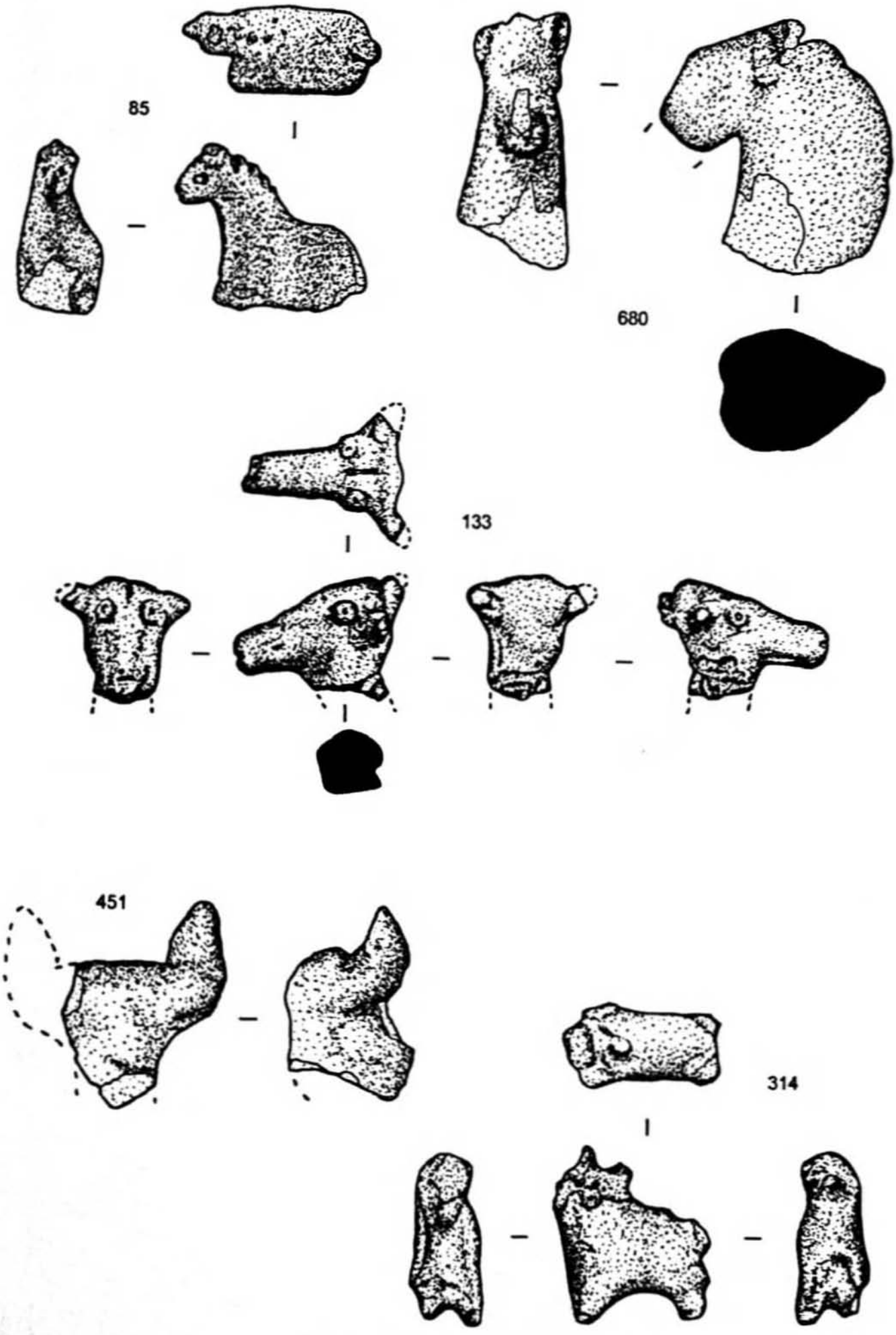


Figure 12.8: Terracotta objects (1:2)
Buffalo figurines (Sfs 451 & 133). Small humped bull (Sf 314). Horse figurines (Sfs 85 & 680)

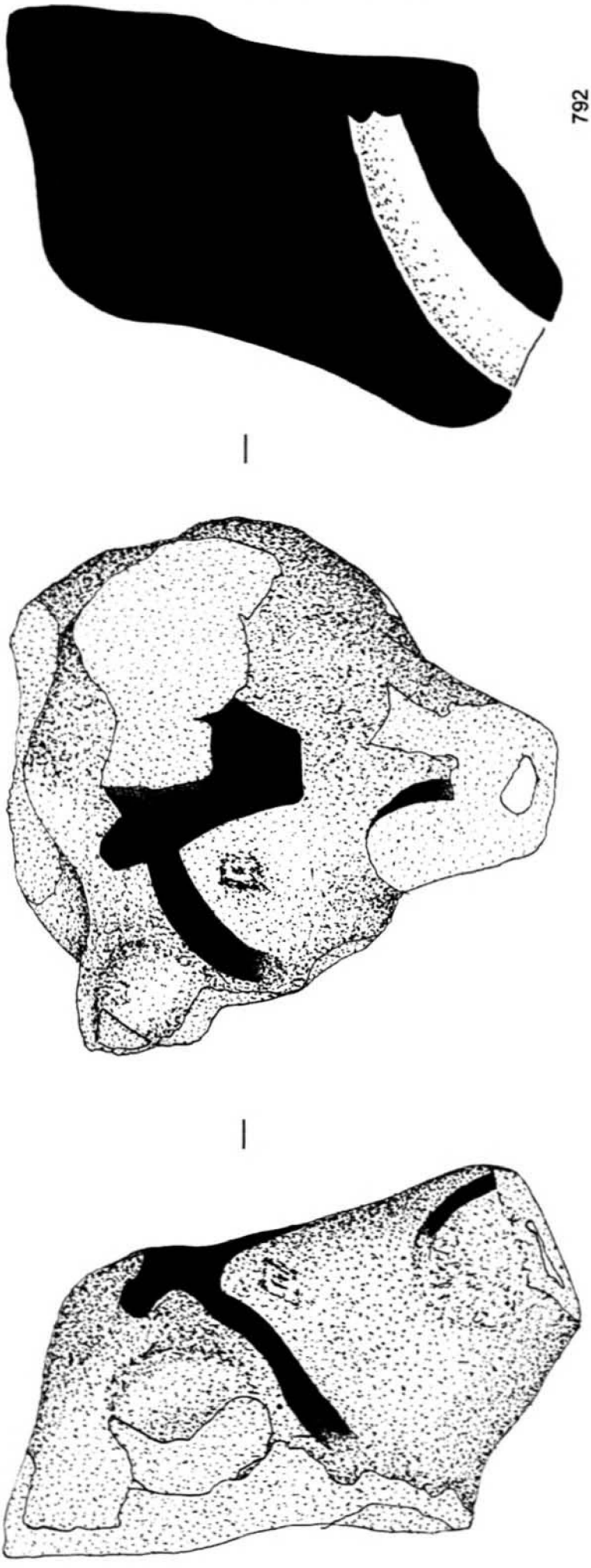


Figure 12.9: Terracotta objects (1:2)
Elephant figurine (Sf 792)

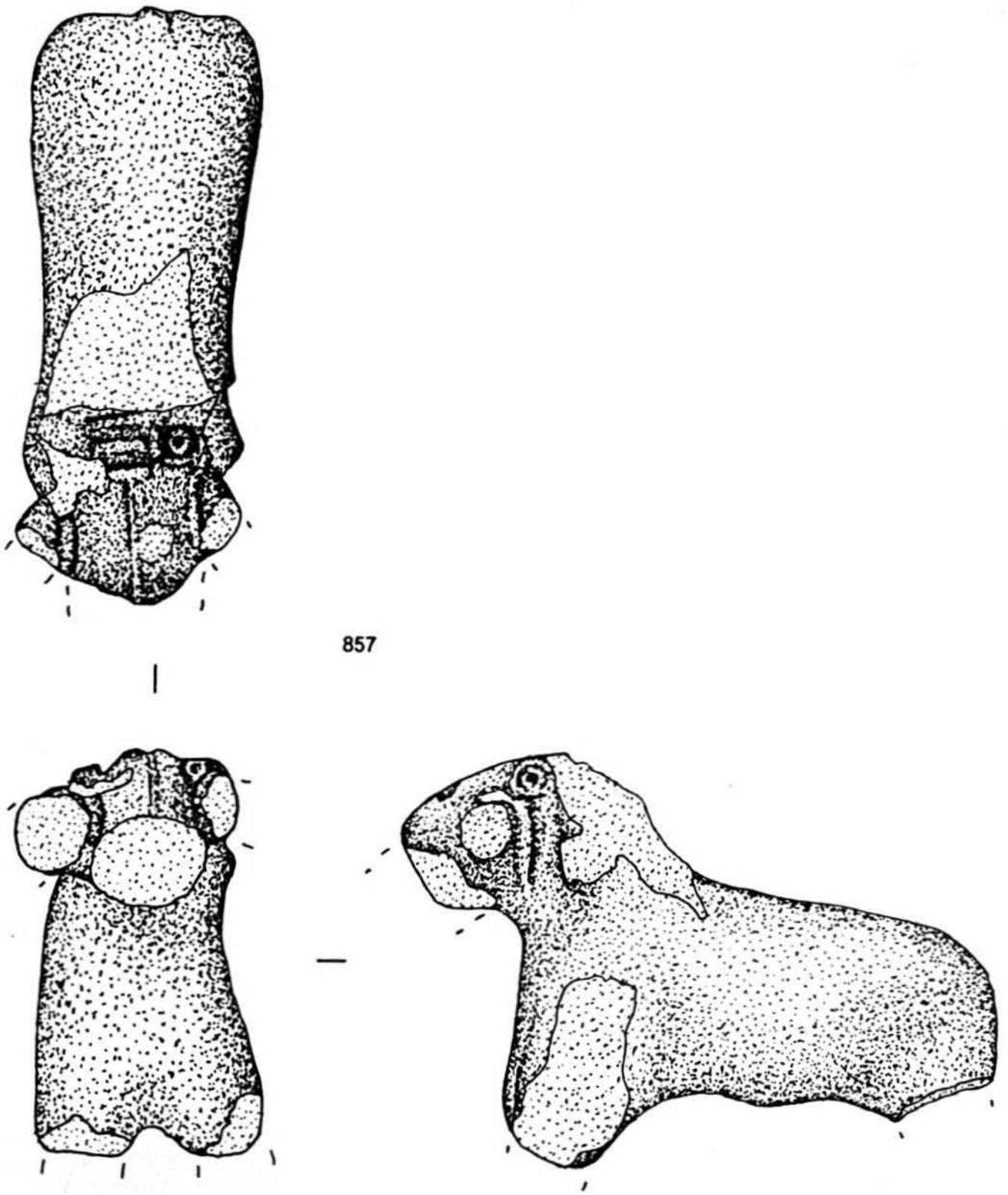


Figure 12.10: Terracotta objects (1:2)
Elephant figurine (Sf 857)

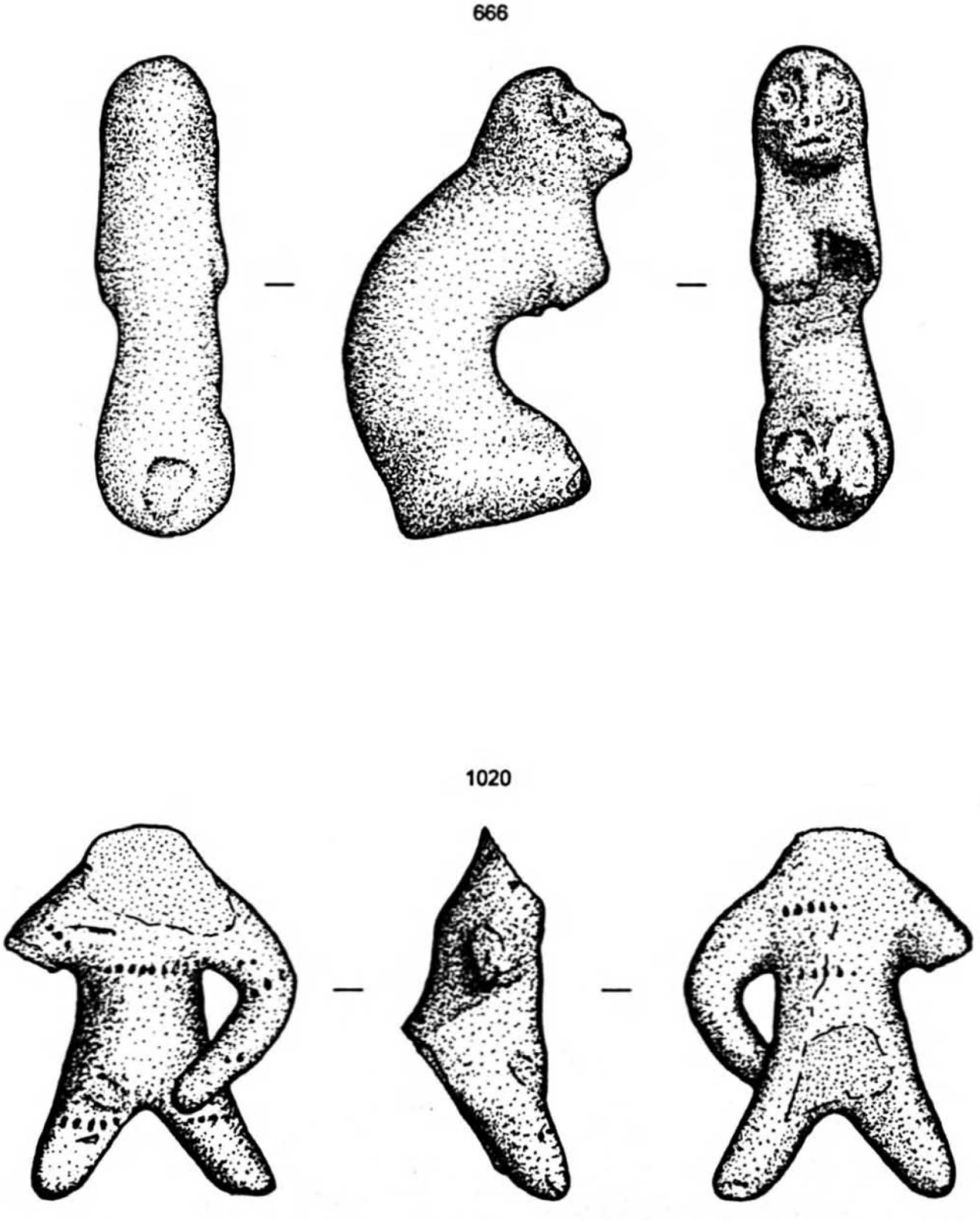


Figure 12.11: Terracotta objects (1:2)
Monkey figurines (Sfs 666 & 1020)

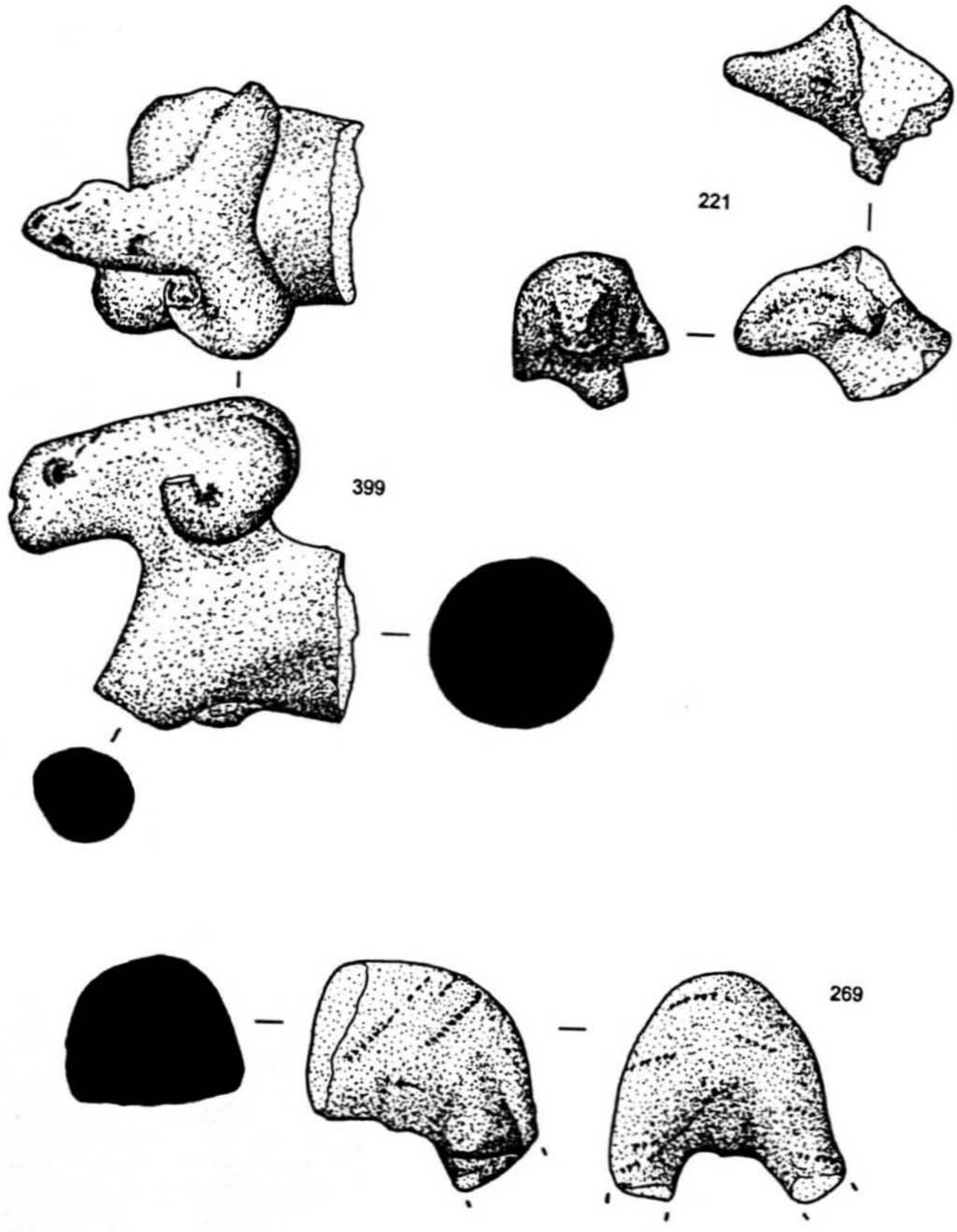


Figure 12.12: Terracotta objects (1:2)
Ram figurines (Sfs 221 & 399). Tiger figurine (Sf 269)

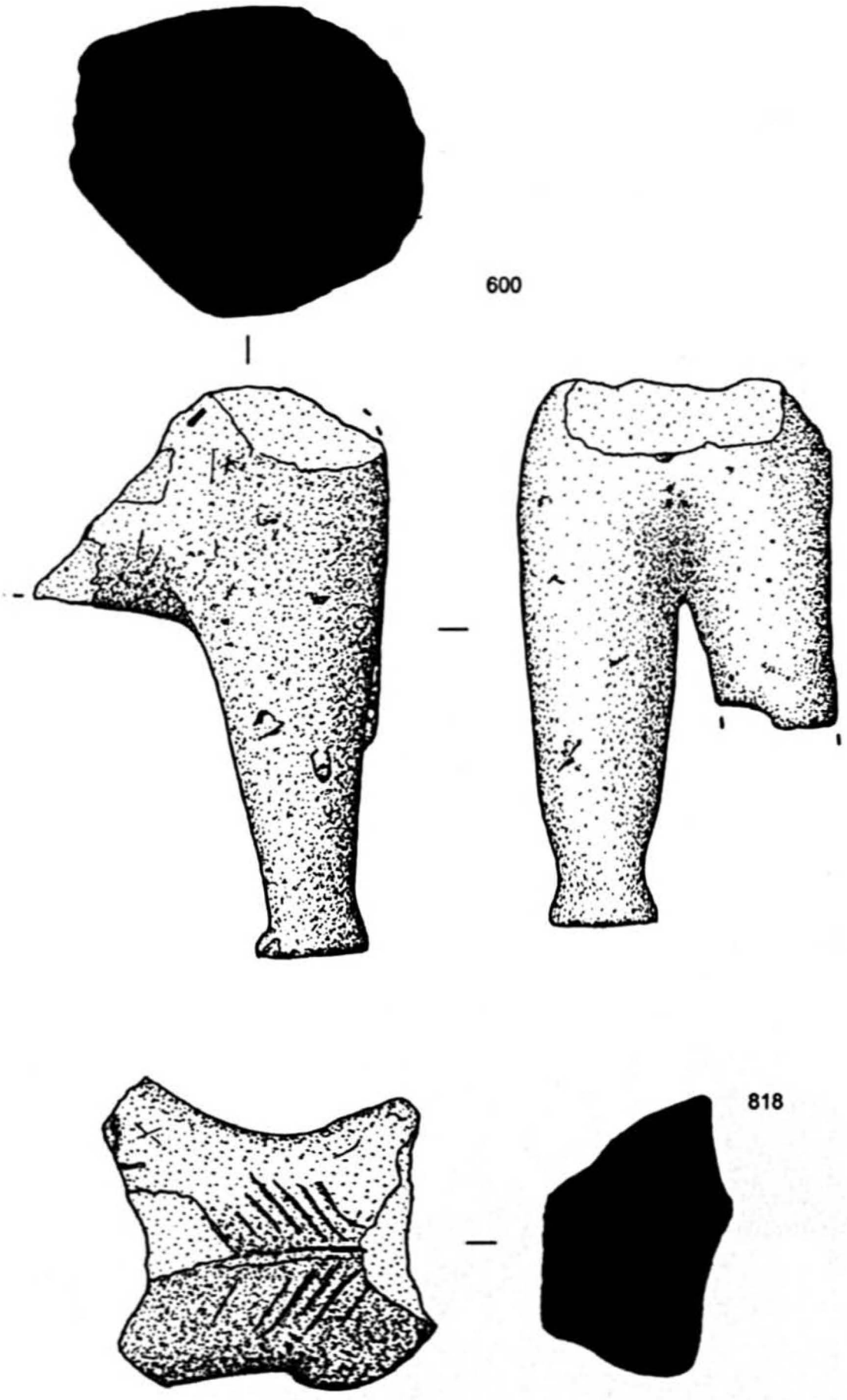


Figure 12.13: Terracotta objects (1:2)
Unidentified animal figurines (Sfs 600 & 818)

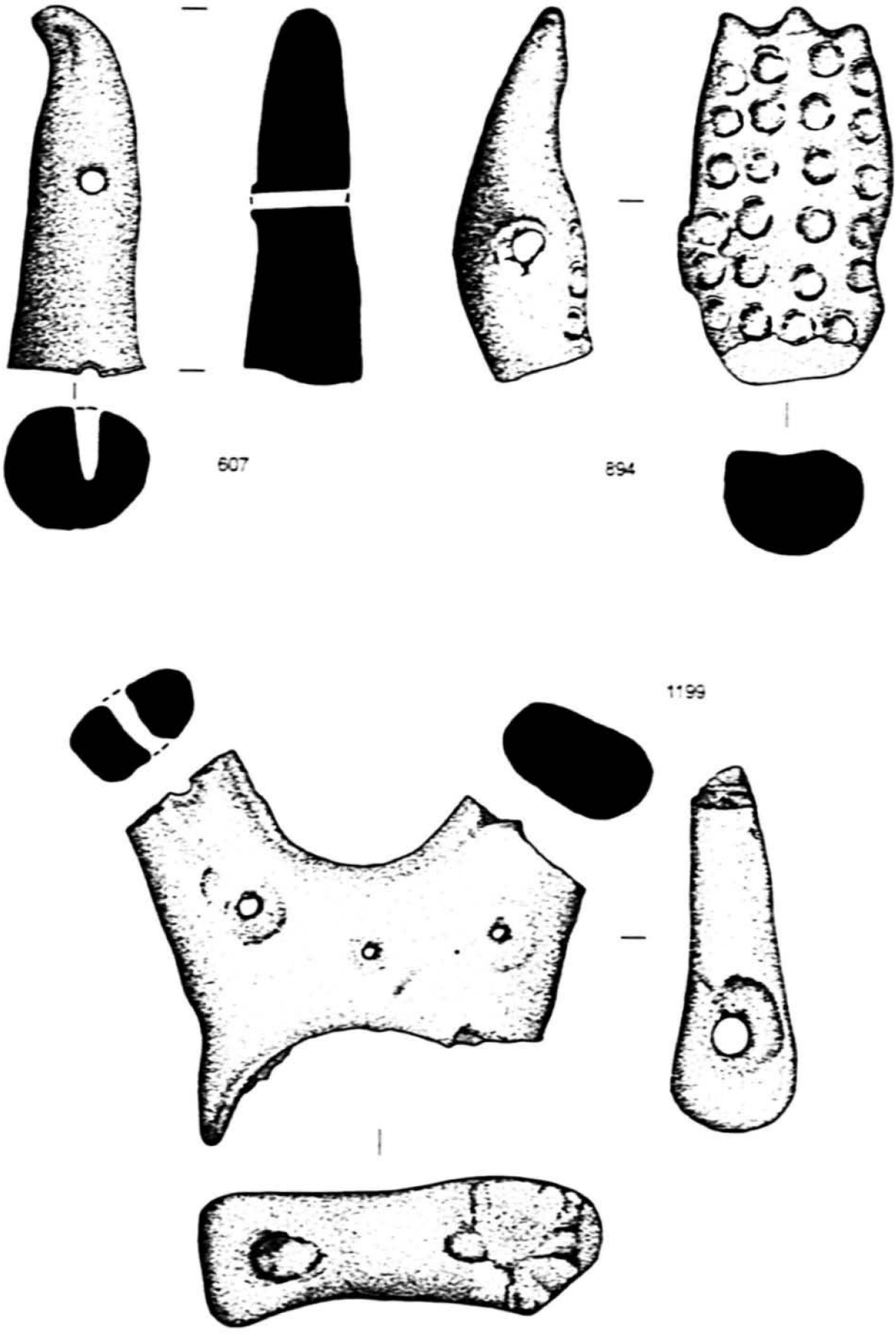


Figure 12.14 Terracotta objects (1:2)
Carts (Sfs 607 & 1199). Bird chariot (Sf 894)

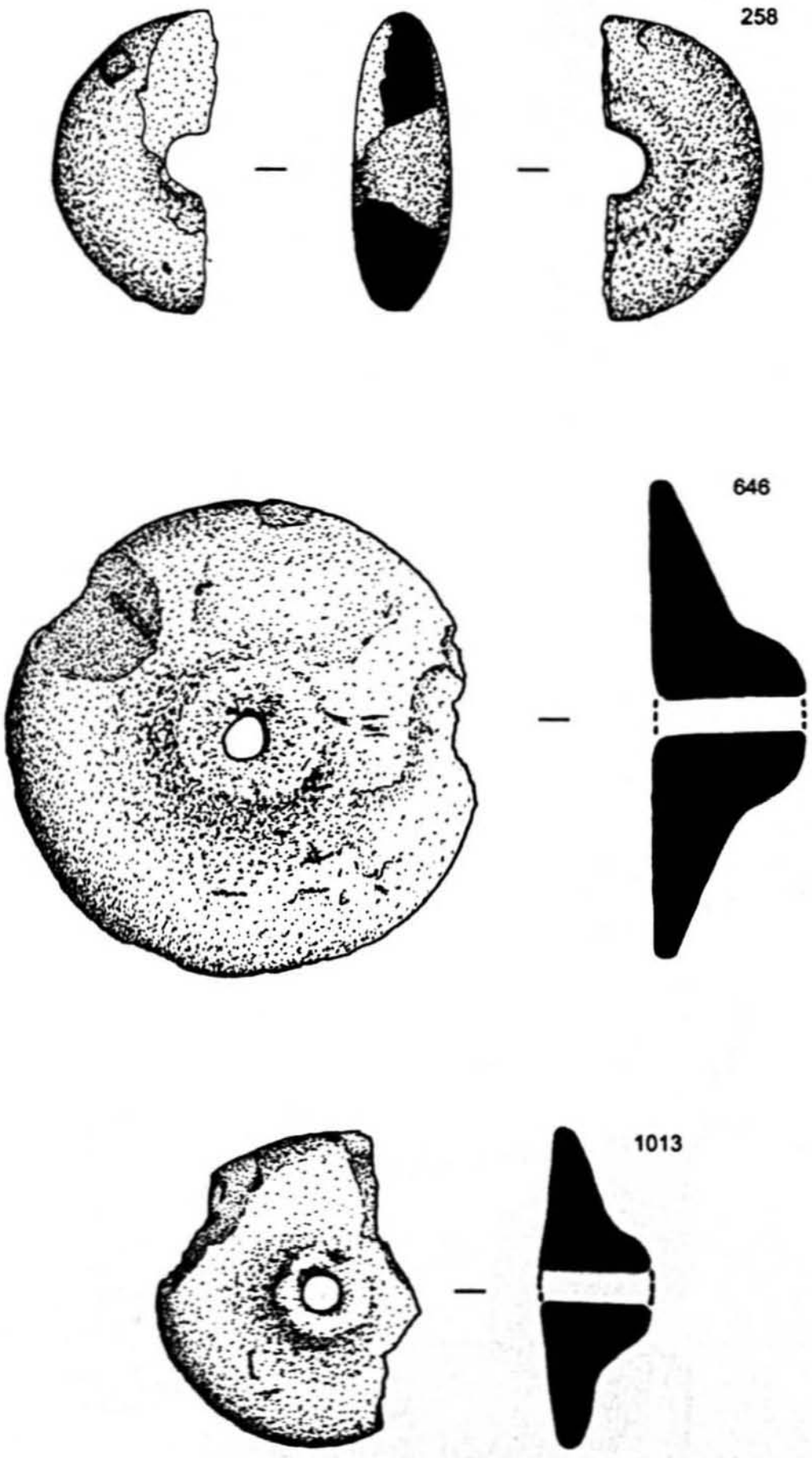


Figure 12.15: Terracotta objects (1:2)
Wheels (Sfs 258, 646 & 1013)

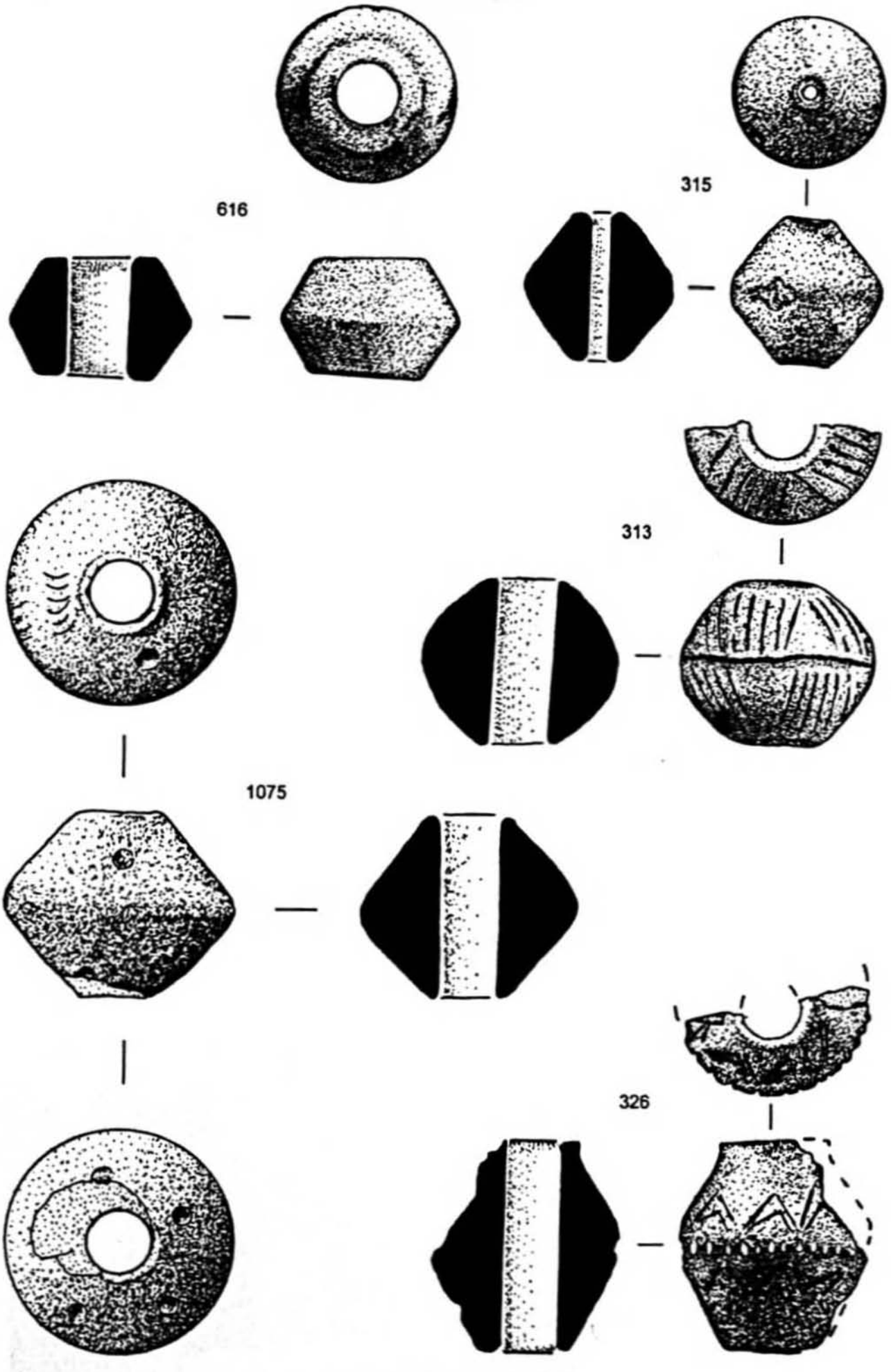


Figure 12.16: Terracotta objects(1:2)
Biconical beads (Sfs 313, 315, 326, 616 & 1075)

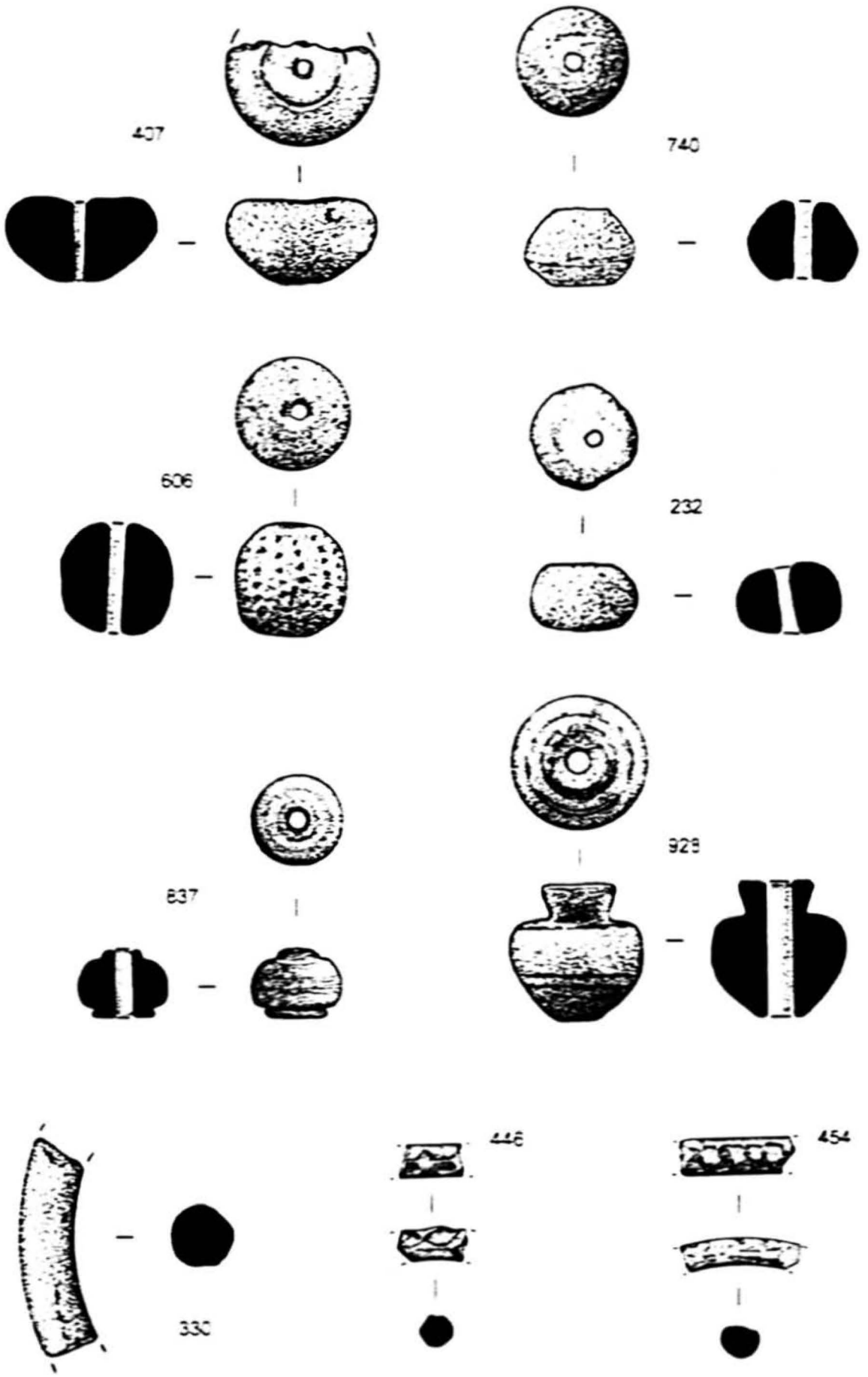


Figure 12.1 Terracotta objects (1:2)
Beehive-shaped beads (Sfs 407 & 740). Spherical bead (Sf 606). Disc barrel bead (Sf 232). Vase-shaped beads (Sfs 837 & 929). Decorated bangles (Sfs 446 & 454). Undecorated bangle (Sf 330).

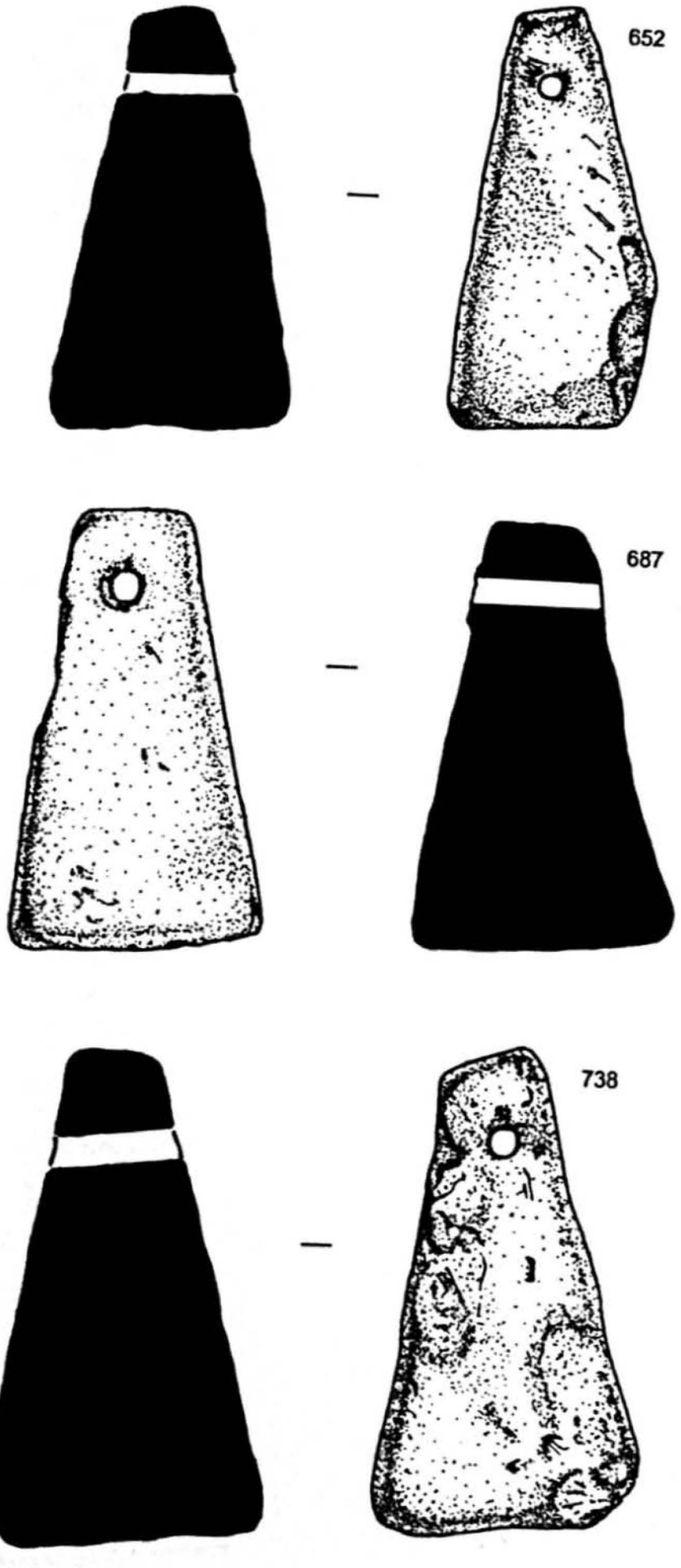


Figure 12.18: Terracotta objects (1:2)
Pyramidal weights (Sfs 652, 687 & 738)

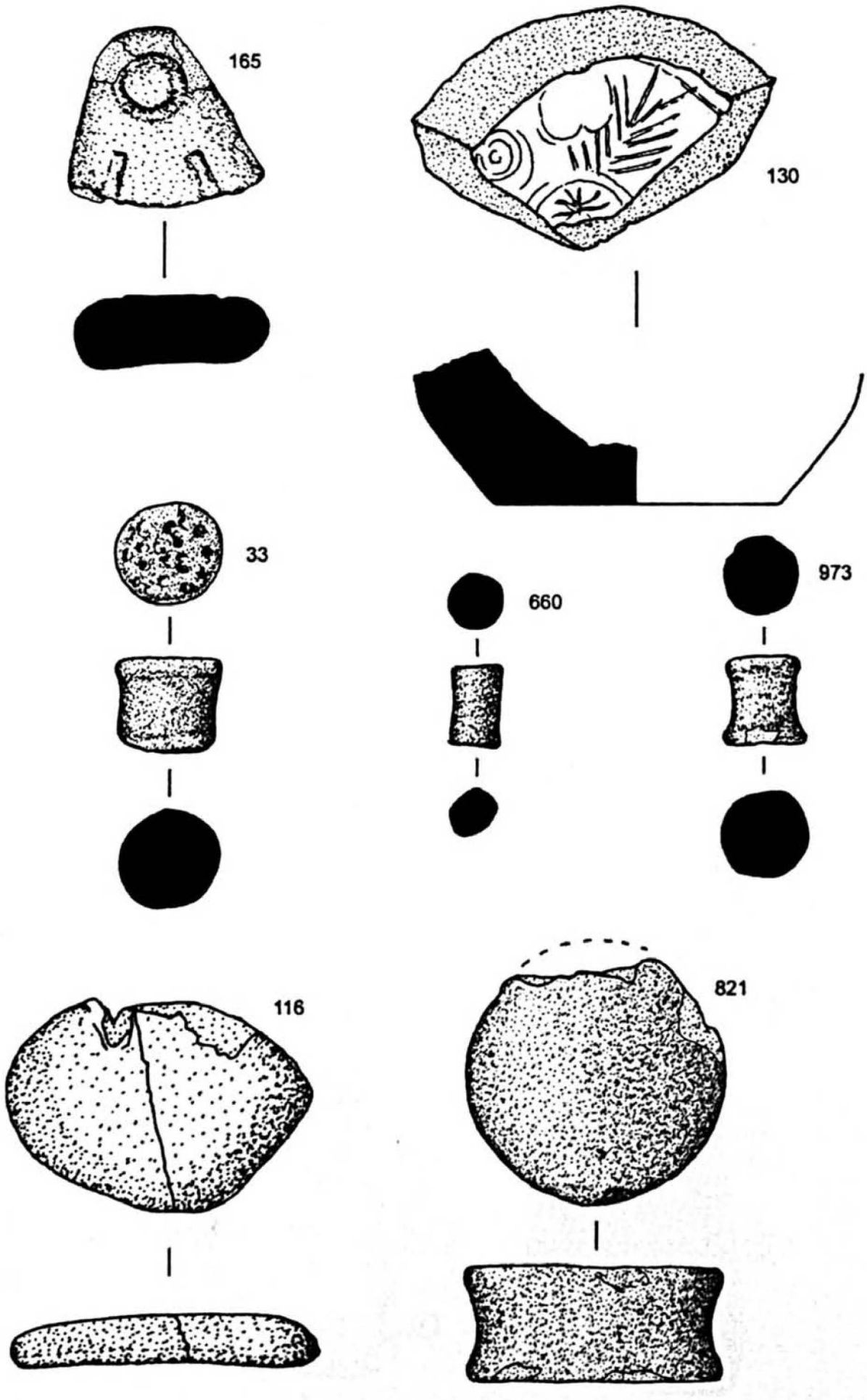


Figure 12.19: Terracotta objects (1:2)
Unidentified shaped objects (Sfs 116 & 165). Decorated vessel mould (Sf 130). Ear reel or game pieces (Sfs 33, 660, 821 & 973)

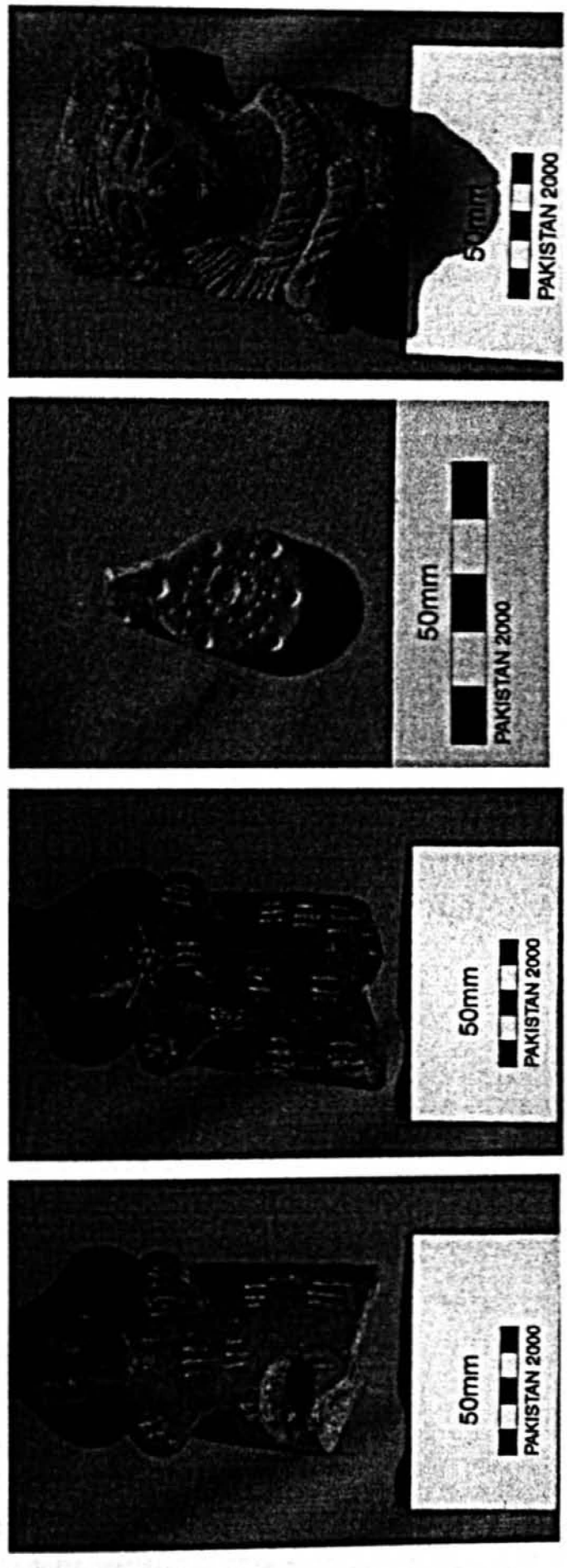


Plate 12.1: Terracotta objects
Fiddle-shaped figurine (Sf 344) (front and back). Fiddle-shaped figurine (Sf 483). Baroque Lady (Sf 57)

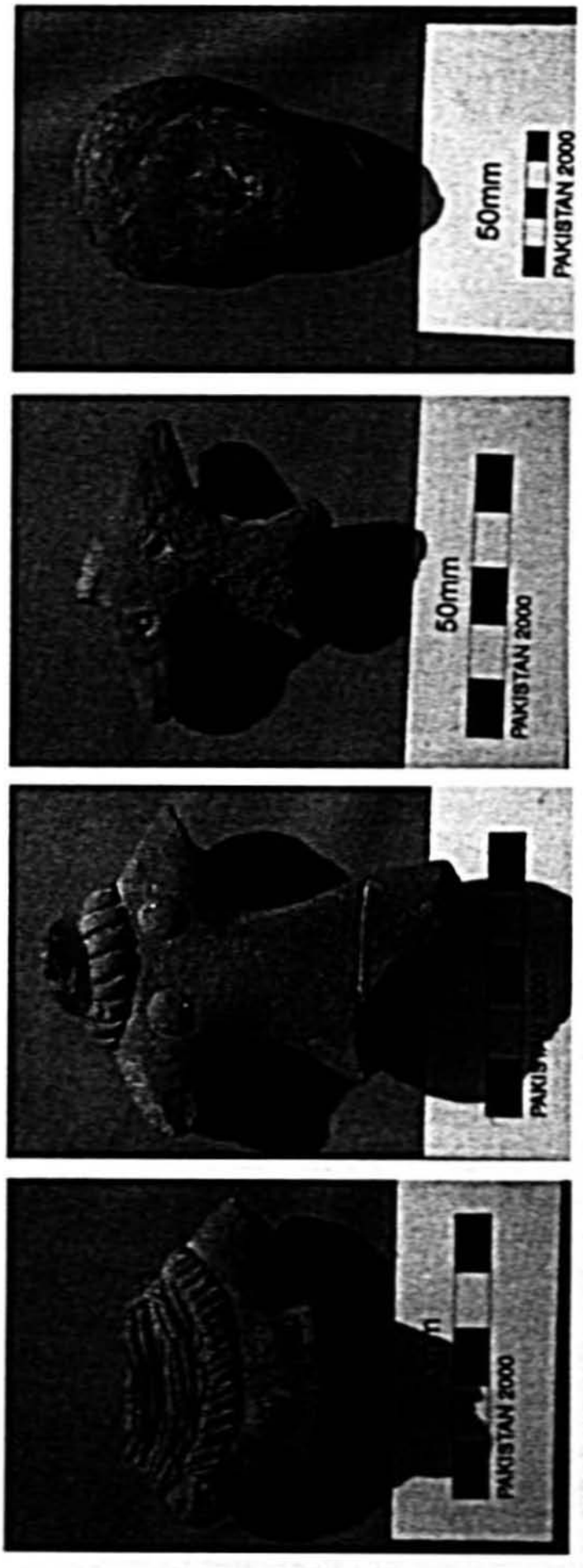


Plate 122. Terracotta objects
Baroque Ladies (Sfs 943 & Sf 1052). 'Archer' figurine (Sf 602). Moulded head with laurel wreath (Sf 854)

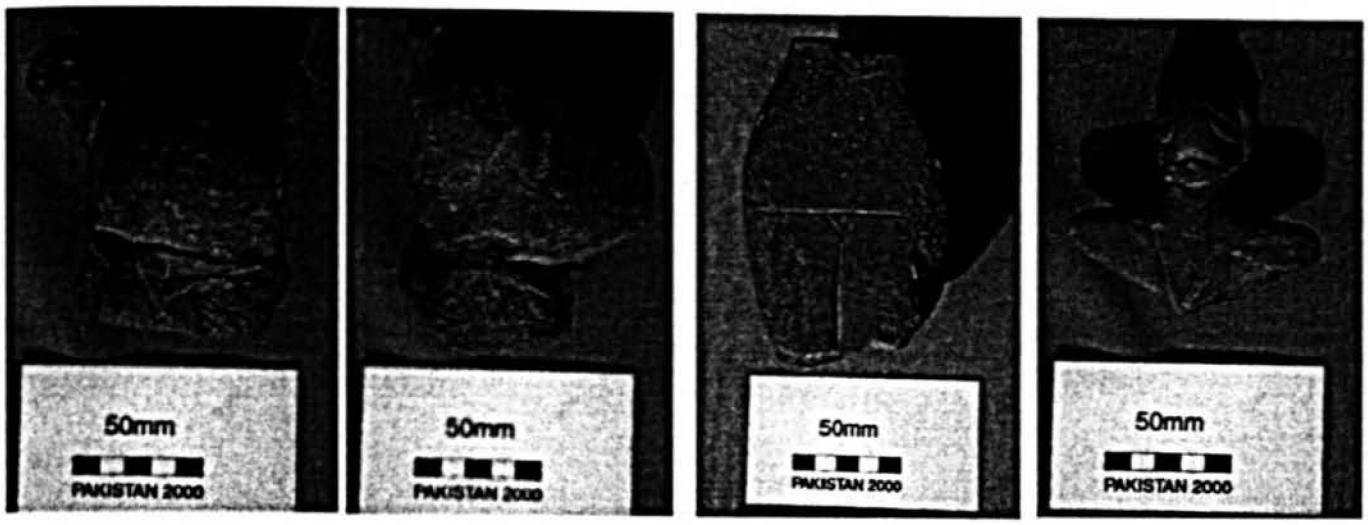


Plate 12.3: Terracotta objects
Pregnant figurine (Sf 486) (front & side). Female figurine with upper body and legs missing (Sf 299). Female figurine with legs missing (Sf 1085)

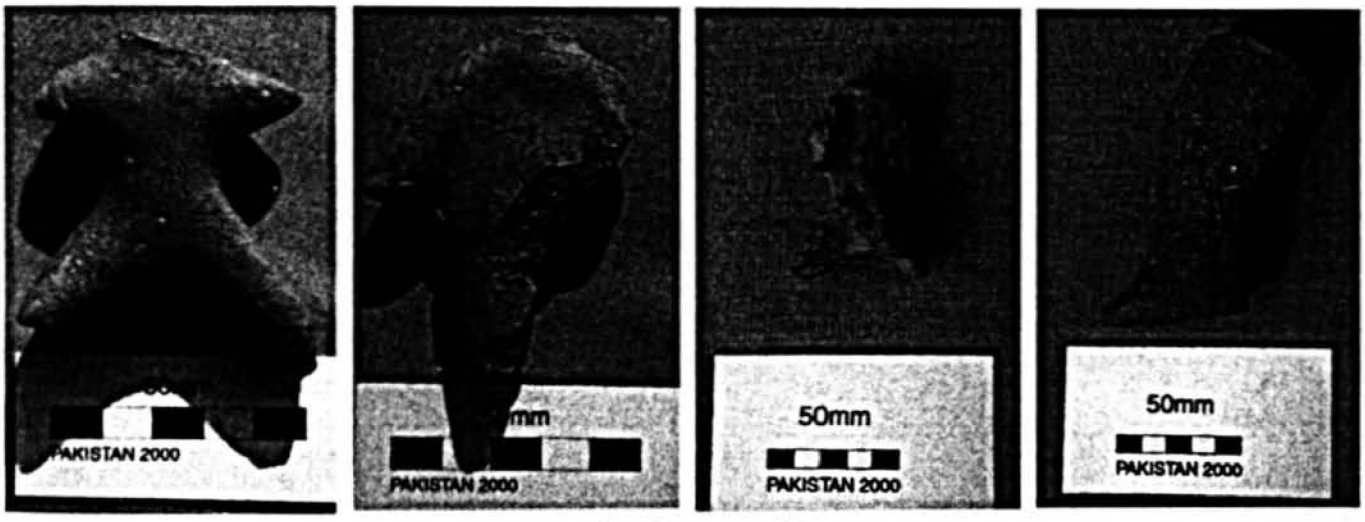


Plate 12.4: Terracotta objects
Sexless figurine with pinched arms and splayed legs (Sf 685). Unidentified male torso (Sf 1219). Small figurine with pinched arms and legs (Sf 109). Human leg and foot (Sf 605)

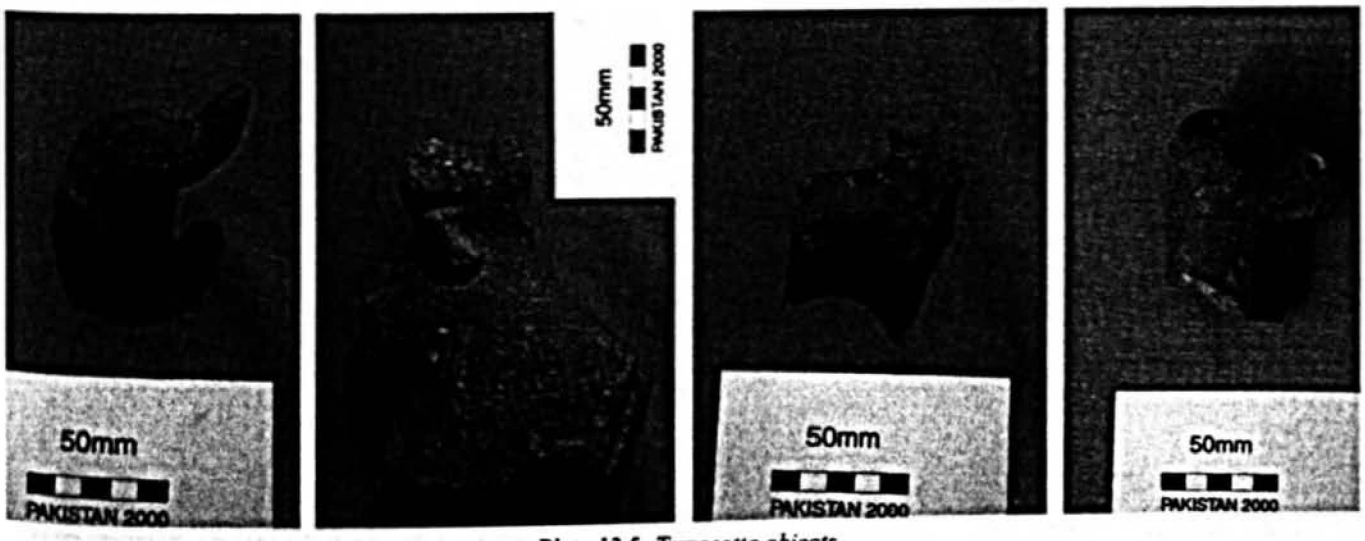


Plate 12.5: Terracotta objects
Buffalo head and horn (Sf 451). Humped bull (Sf 88). Small humped bull (Sf 314). Camel head (Sf 113)

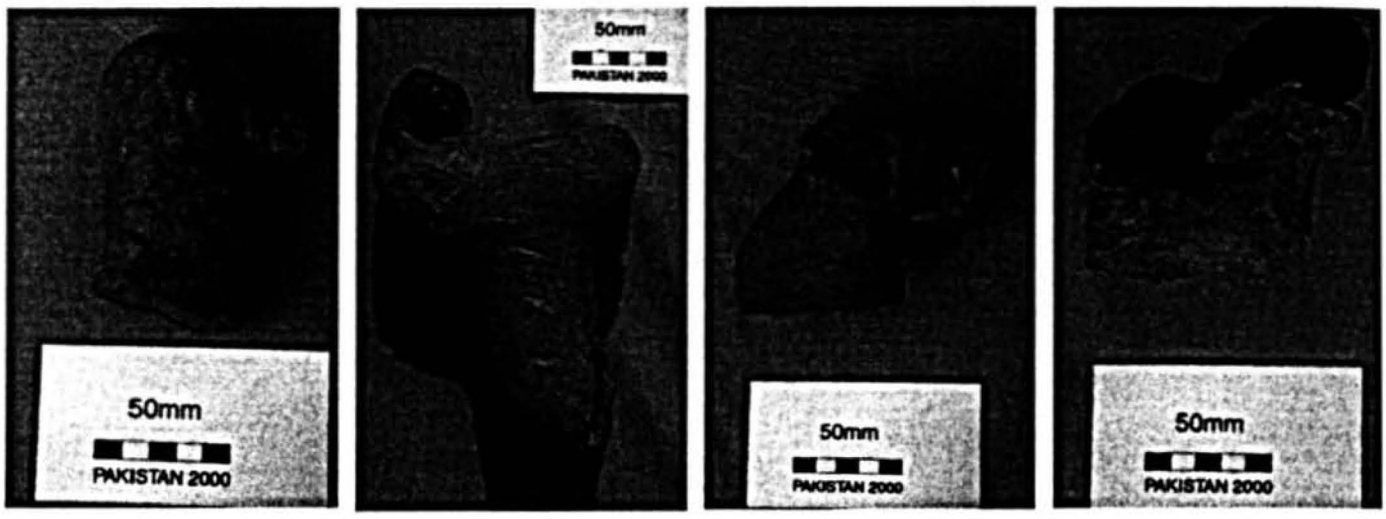


Plate 12.6: Terracotta objects
Camel head (Sf 635). Elephant without trunk (Sf 857). Horse head (Sf 601). Legless horse (Sf 895)

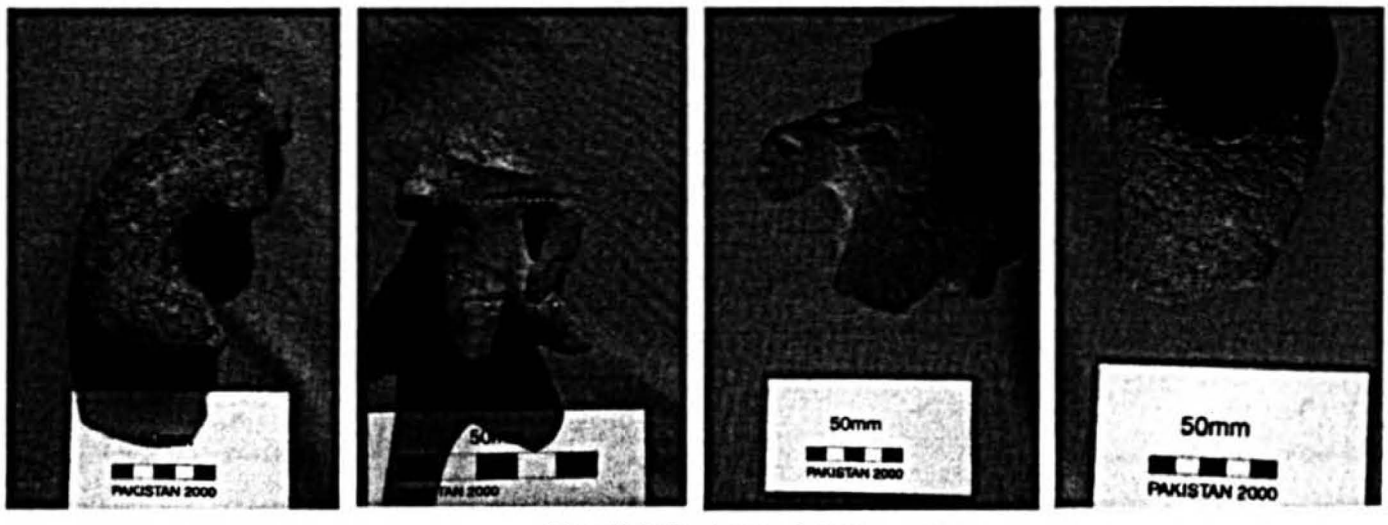


Plate 12.7: Terracotta objects
Monkey (Sf 666). 'Seated' monkey (Sf 1020). Ram head (Sf 399). Tiger body (Sf 269)

Plate 12.8: Terracotta objects
Cart frame (Sf 1199). Bird chariots (Sfs 894 & 894). Wheel with protruding hub (Sf 646)

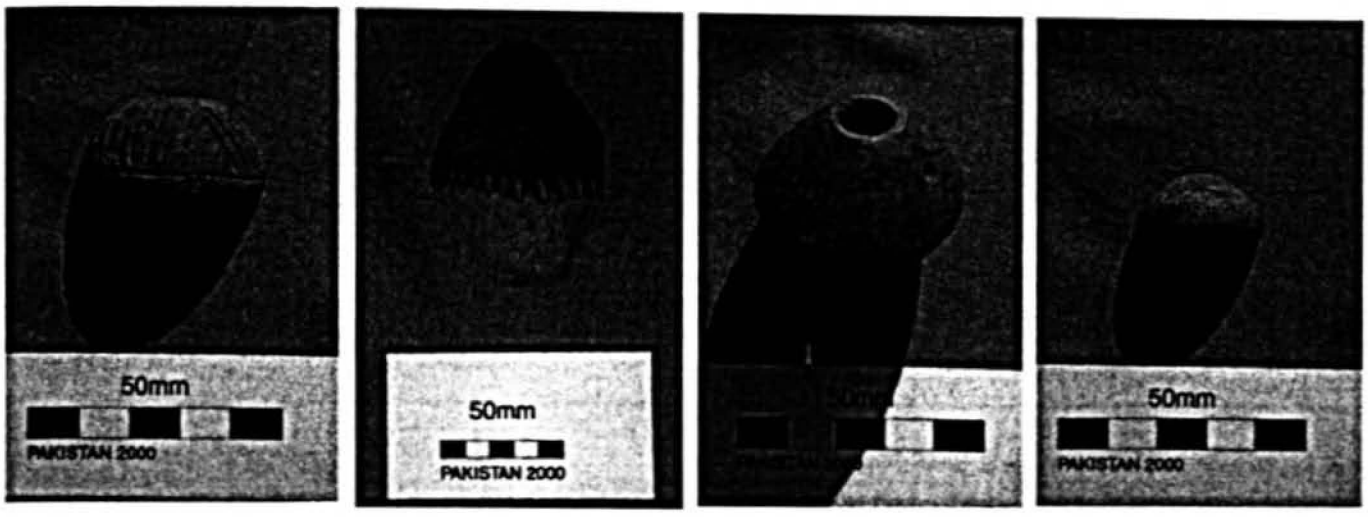


Plate 12.9: Terracotta objects
Biconical beads (Sfs 313, 326 & 1075). Beehive-shaped bead (Sf 407)

Plate 12.10: Terracotta objects
Spherical bead (Sf 725). Vase-shaped bead (Sf 928). Pyramidal weight (Sf 687). Shaped object (Sf 165)

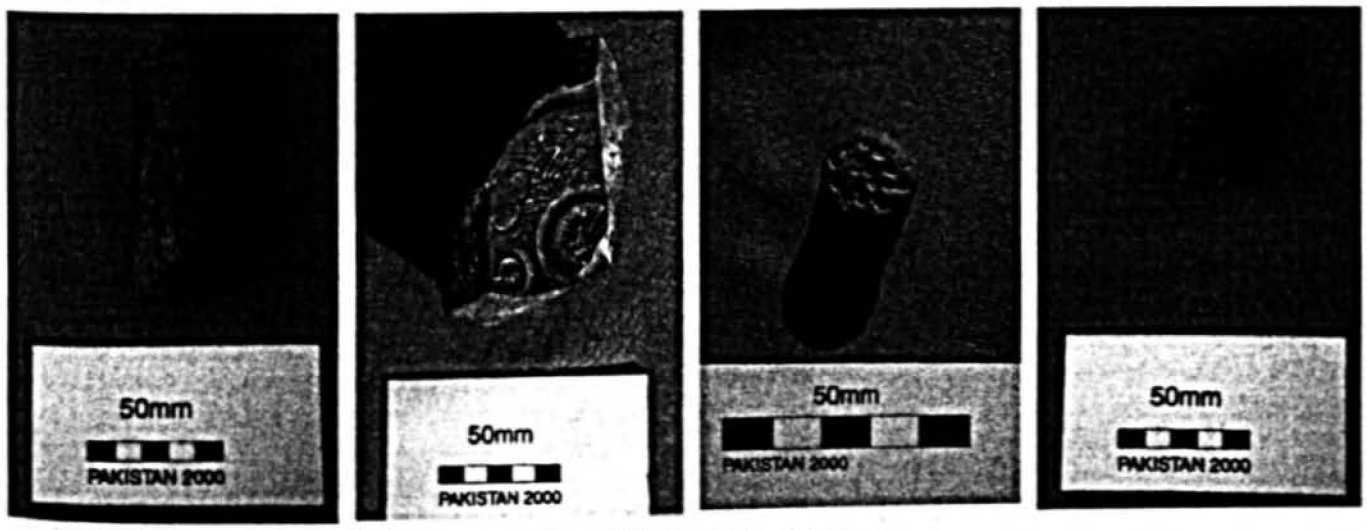


Plate 12.11: Terracotta objects
Stamp (Sf 300). Vessel mould (Sf 130). Ear reel or game pieces (Sfs 33 & 655)

CHAPTER 13

THE GLAZED CERAMICS

Derek Kennet, Cameron Petrie & Seth Priestman

13.1 INTRODUCTION

In addition to the large corpus of unglazed ceramics, 87 sherds of glazed ceramics were recovered from the mixed contexts of the robber pitting of Period V and from the erosional washes of Period VI (Table 13.1) (Colour Plate 1.4). They comprise 12 ware groups, including Green-on Yellow Underglaze Painted Ware, Monochrome Yellow Glazed Ware, Sgraffiato Style Ware, Turquoise-on-White Underglaze Painted Ware, Persian Blue Speckled Related Ware, Monochrome White Glazed Ware, Blue-on-Purple Underglaze Painted Ware, Monochrome Turquoise Frit Ware, Monochrome Green Sgraffiato Ware, Monochrome Green Glazed Ware, Blue and Purple on White Underglaze Painted Ware, and modern Bone China. They may be further subdivided into three main fabrics. The first, Fabric 1, is termed crude red earthenware and is a heavily micaceous dense dark red (2.5YR 5/6–5YR 6/6) fabric with a wide range of poorly sorted sub-rounded inclusions mostly >1mm. Most numerous are opaque white flecks, possibly lime. The feel tends to be harsh and the fracture hackly though neither in the extreme. Fabric 2 is a fine red earthenware with a dense well-levigated dark red fabric (5YR 6/6) and a very fine micaceous background. Only very occasional coarse inclusions are visible (all <1mm) of an opaque white material that is possibly lime. The feel is smooth and the fracture verging on sub-conchoidal. Fabric 3, a fine red earthenware, is a dense, well-levigated dark red fabric (5YR 6/6). No coarse inclusions are visible. It has a slightly rough feel and hackly fracture. Finally, Fabric 4 is a frit/stonepaste with a porous and brittle pure white (10YR 8/1) frit body with a granular composite structure, a sandy texture and a smooth fracture.

All of the groups date from the 11th/12th century and later. There is relatively little known about ceramics of this period in this region, and there are, with a few exceptions such as Lashkari Bazar (Gardin 1963), practically no local stratified excavations with a reliable chronology that can be used to date such material, although similar material has been found on a number of excavated sites in Pakistan (e.g. Gor Khuttree, Hund, Damkot, Bir-kot-ghwandai, 'The Castle' Raja Gira, Gumbatuna, Pir Manek Rai, Sarai Khola, Lahore Fort, Tulamba, Kandahar (also sites listed by Mughal *et al.* 1996, e.g. Khanane, Assal Suleman, Balla Wala, Dhalan Khalan, Rashid Ka Thah, Bhalar, Dullu Kalan, Halloke II, Taraga, Lulani, Kanwen (Punj Peer), Guga), although the dating evidence that these excavations offer is not very strong, they do provide an idea of the frequency and range of distribution of some of the groups defined at Charsadda. Because of the lack of local parallels, reference is made throughout this report to studies from Iran and eastern Arabia. The most useful of these are the Kush and al-Mataf excavations in Ras al-Khaimah in the United Arab Emirates, where a stratified sequence covering the 4th to 16th centuries AD has been excavated, and to supplementary survey material from the same place which partially covers later periods (Kennet 2004). In addition, the Williamson Collection is the largest collection of late Islamic ceramics from the region. This extensive survey collection from Southern Iran and the Gulf coast represents the most important point of comparison but it does not offer independent dating evidence (Williamson 1970; Priestman & Kennet 2002; Priestman 2003). Stein's survey collection also contains useful comparative material. References to the Stein Collection result from a study of the Sasanian and Islamic finds from his surveys of Southern and Western Iran housed at the British Museum (Priestman 2004) and from Stein's own notes and publications (1932; 1936; 1937; 1940). Note should also be made of Kervran's ongoing excavations at Sehwan Sharif (e.g. Kevran 1999) and Petrie's work at Akra (Petrie 2002) in Pakistan. Some reference is also made to excavations in East Africa at coastal sites such as Kilwa, Manda and Shanga (Chittick 1974; 1984; Horton 1996: 293).

13.2 THE GLAZED WARES

13.2.1 Green-on-yellow underglaze painted ware

There are five sherds in this group recovered from four separate contexts, three from Period V and two from Period VI. All are yellow glazed bowls with painted decoration, mostly in green but with other colours represented. Some variation in glaze opacity is suggested and all belong to Fabric 1. Sf 773 is a bowl body sherd with an unglazed exterior. Interior is covered with a slightly opaque bright yellow glaze with diffuse copper-green painted decoration. This is probably a local ware closely related to the late underglaze-painted ware tradition (Groups 13.2.4, 13.2.7 & 13.2.11 below), and more specifically to a set of opaque acidic green/yellow glazed wares that may originate in the Afghanistan/Pakistan region; two sherds of such a ware occur in the Williamson Collection. They are probably all of local production.

Special find no: 385 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 0.5g Dimensions: 1.1 x 0.9 x 0.4cm

Special find no: 760 Trench: Ch. VIII Context: 1010
Stratigraphic Phase: V Weight: 14.3g Dimensions: 5.8 x 3.1 x 1.9cm

Special find no: 773 Trench: Ch. VIII Context: 1012
Stratigraphic Phase: V Weight: 11.9g Dimensions: 3.3 x 2.9 x 1.8cm
(Colour Plates 1.4.1 & 1.4.2)

Special find no: 776 Trench: Ch. VIII Context: 1012
Stratigraphic Phase: V Weight: 15.2g Dimensions: 4.8 x 3.3 x 1.2cm

Special find no: 782 Trench: Ch. VIII Context: 1000
Stratigraphic Phase: VI Weight: 10.4g Dimensions: 3.2 x 2.8 x 0.9cm

13.2.2 Monochrome yellow glazed ware

This group is represented by just two sherds, both recovered from Period V contexts but from separate areas of the excavation. Sf 772 is a base sherd with foot but the vessel form is unknown. Its interior is well covered with a transparent glossy yellow/green glaze. Monochrome yellow/green glazed wares fall within a long tradition that began with the sgraffiatos in the 11th/12th century AD. When these died out by the 13th century, one sees a continuation of various forms of what appears to be very varied and probably rather localised productions of monochrome yellow/green wares. Similar material has been identified in Ras al-Khaimah where it is referred to as GMONO.2 and is dated to the 14th/15th century and later (Kennet 2004). In theory this sherd could date to anywhere between the 14th/15th and 19th centuries. As GMONO.2 is more common from post-16th century assemblages in Ras al-Khaimah the sherds from Charsadda are more likely to be datable to that time. These sherds are probably a local production and belong to Fabric 2.

Special find no: 772 Trench: Ch. VIII Context: 1012
Stratigraphic Phase: V Weight: 6.0g Dimensions: 3.0 x 2.4 x 0.8cm
(Colour Plate 1.4)
(Figure 13.1)

Special find no: 281 Trench: Ch. VI Context: 54
Stratigraphic Phase: V Weight: 0.8g Dimensions: 1.2 x 1.1 x 0.5cm

13.2.3 Sgraffiato style ware

This group is better represented than some of the other classes discussed here. Fifteen sherds were recovered from an assortment of contexts, eleven from Period V and four from Period VI. Twelve out of fifteen of the sherds were recovered from Trench VIII. Sf 812 is a body sherd from a bowl. The interior and exterior are covered with a thin white slip wash and a coarsely crazed transparent blue tinted glaze. The interior has crude sgraffiato style decoration in lines that are thicker than 1mm. A roughly filed down trivet mark is also visible on the interior. Sgraffiato of this style is normally be dated to the late 11th–13th century in this part of the Islamic world, however the glaze quality and body of this sherd strongly suggest that this might be a much later post-medieval production employing the sgraffiato technique. Blue/turquoise sgraffiato of the 12th–13th century is known to occur, but the very small quantity in the Williamson Collection (2 out of a total of 692 sgraffiato sherds), and in the Stein Collection (2 sherds from 146), suggest that it was very rare, at least in Iran. All the sherds are probably a local production and belong to Fabric 1.

Special find no: 12 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 48.7g Dimensions: 6.7 x 4.3 x 1.3cm

Special find no: 328 Trench: Ch. VI Context: 58
Stratigraphic Phase: V Weight: 56.2g Dimensions: 8.1 x 4.1 x 0.9cm

Special find no: 397 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 2.5g Dimensions: 2.8 x 1.7 x 0.4cm

Special find no: 618 Trench: Ch. VIII Context: 1000
Stratigraphic Phase: VI Weight: 39.3g Dimensions: 7.8 x 7.5 x 0.7cm

Special find no: 661 Trench: Ch. VIII Context: 1003
Stratigraphic Phase: V Weight: 22.9g Dimensions: 6.6 x 4.8 x 0.65cm.

Special find no: 686 Trench: Ch. VIII Context: 1003
Stratigraphic Phase: V Weight: 30.1g Dimensions: 4.3 x 4.6 x 0.15cm.

Special find no: 727 Trench: Ch. VIII Context: 1012
Stratigraphic Phase: VI Weight: 11.4g Dimensions: 3.8 x 2.2 x 0.9cm

Special find no: 779 Trench: Ch. VIII Context: 1000
Stratigraphic Phase: VI Weight: 4.3g Dimensions: 2.9 x 1.8 x 0.6cm.

Special find no: 781 Trench: Ch. VIII Context: 1000
Stratigraphic Phase: VI Weight: 2.1g Dimensions: 2.6 x 1.7 x 0.5cm

Special find no: 785 Trench: Ch. VIII Context: 1000
Stratigraphic Phase: VI Weight: 25.3g Dimensions: 4.2 x 3.9 x 1.1cm

Special find no: 793 Trench: Ch. VIII Context: 1003
Stratigraphic Phase: V Weight: 15.1g Dimensions: 5.4 x 2.9 x 0.9cm

Special find no: 809 Trench: Ch. VIII Context: 1003
Stratigraphic Phase: V Weight: 3.4g Dimensions: 3.2 x 2.4 x 0.85cm

Special find no: 812 Trench: Ch. VIII Context: 1003
Stratigraphic Phase: V Weight: 7.7g Dimensions: 3.1 x 3.0 x 1.0cm.
(Colour Plate 1.4)

Special find no: 852 Trench: Ch. VIII Context: 1015
Stratigraphic Phase: V Weight: 7.2g Dimensions: 3.1 x 2.2 x 0.8cm

Special find no: 858 Trench: Ch. VIII Context: 1019
Stratigraphic Phase: V Weight: 205.0g Dimensions: 8.8 x 7.9 x 2.65cm.

13.2.4 Turquoise-on-white underglaze-painted ware

This group is represented by 21 sherds, 17 from Period V and four from Period VI. Contexts 58 and 1012 in Period V have the highest concentrations with five and six sherds respectively. All sherds are from bowls or plates with turquoise-on-white decoration. Sf 814 is the rim sherd of a bowl with an unglazed exterior. The interior is covered with a white slip over-painted with diffuse, deep turquoise decoration and covered with a transparent glaze, which is coarsely crazed and has a stippled surface. This class belongs to a tradition known as 'underglaze-painted ware'. This is a long-lived and complex tradition of decorating pottery of which there are many local, regional, and chronological subdivisions. Excavations in Ras al-Khaimah indicate that the tradition began to be common in about the 11th century and has endured as late as the present day in some places (Kennet 2004: MGPAINT & UNDERGL). By comparison with the stratified sequence in Ras al-Khaimah the style and technique of this group suggest that it should be dated to later than the 16th century. In Iran the most common underglazed-painted wares are the blue-and-white, and turquoise-and-black decorated versions, often with rosette motifs which may be imitations of the later frit wares or, less plausibly, Chinese Blue and White (cf. Soustiel 1985: 214). A wide range of other colour schemes is also represented. Such pottery is common in Iran, occurring on 100 sites in the Williamson Collection, distributed widely along the coast and through inland areas of Fars and Kerman. A further 29 sites with this pottery are known from Stein's surveys of Southern Iran, again distributed widely across Fars, Kerman and also Baluchistan. A total of 29 sites are represented by the Stein Collection finds in the British Museum (Dept. ANE and Asia). It is not known if there are further underglaze

painted ware sherds in the portions of the Stein Collection housed in America and Iran but this remains a possibility. Other parallels for MGPAINT.2 come from Kilwa and Manda in East Africa (Chittick 1974: 305, colour pl. II, pl. 114 d, e; 1984: 12, 82, pl. 36), in levels dated to the 16th–18th century and possibly also from Bahrain (Larsen 1983: 291, fig. 68 k–n). This group is probably a local production and all belongs to Fabric 1.

Special find no: 343 Trench: Ch. VI Context: 58
Stratigraphic Phase: V Weight: 8.6g Dimensions: 3.7 x 3.3 x 0.5cm

Special find no: 347 Trench: Ch. VI Context: 58
Stratigraphic Phase: V Weight: 7.4g Dimensions: 5.0 x 2.8 x 0.55cm

Special find no: 381 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 5.7g Dimensions: 2.9 x 2.5 x 0.6cm

Special find no: 382 Trench: Ch. VI Context: 58
Stratigraphic Phase: V Weight: 60.4g Dimensions: 7.3 x 6.6 x 0.8cm

Special find no: 392 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 5.9g Dimensions: 3.1 x 2.2 x 0.6cm

Special find no: 400 Trench: Ch. VI Context: 58
Stratigraphic Phase: V Weight: 60.4g Dimensions: 4.4 x 4.4 x 0.5cm

Special find no: 728 Trench: Ch. VIII Context: 1012
Stratigraphic Phase: V Weight: 6.3g Dimensions: 3.4 x 2.5 x 0.7cm

Special find no: 729 Trench: Ch. VIII Context: 1012
Stratigraphic Phase: V Weight: 11.4g Dimensions: 4.4 x 4.4 x 0.5cm

Special find no: 766 Trench: Ch. VIII Context: 1012
Stratigraphic Phase: V Weight: 3.3g Dimensions: 2.9 x 2.0 x 0.6cm

Special find no: 770 Trench: Ch. VIII Context: 1012
Stratigraphic Phase: V Weight: 9.6g Dimensions: 2.8 x 2.4 x 1.3cm

Special find no: 771 Trench: Ch. VIII Context: 1012
Stratigraphic Phase: V Weight: 4.9g Dimensions: 2.7 x 2.2 x 0.7cm.

Special find no: 777 Trench: Ch. VIII Context: 1012
Stratigraphic Phase: V Weight: 13.3g Dimensions: 4.9 x 3.4 x 0.8cm

Special find no: 780 Trench: Ch. VIII Context: 1000
Stratigraphic Phase: VI Weight: 15.7g Dimensions: 4.1 x 4 x 1.1cm

Special find no: 784 Trench: Ch. VIII Context: 1000
Stratigraphic Phase: VI Weight: 22.0g Dimensions: 7.1 x 5.0 x 0.8cm

Special find no: 802 Trench: Ch. VIII Context: 1010
Stratigraphic Phase: V Weight: 10.5g Dimensions: 6.2 x 3.5 x 0.6cm

Special find no: 813 Trench: Ch. VIII Context: 1003
Stratigraphic Phase: V Weight: 3.1g Dimensions: 2.3 x 2.0 x 0.5cm

Special find no: 814 Trench: Ch. VIII Context: 1003
Stratigraphic Phase: V Weight: 28.5g Dimensions: 6.0 x 4.8 x 1.0cm
(Colour Plate 1.4)
(Figure 13.1)

Special find no: 851 Trench: Ch. VIII Context: 1018
Stratigraphic Phase: V Weight: 11.1g Dimensions: 5.1 x 3.3 x 0.6cm

Special find no: 867 Trench: Ch. VIII Context: 1019
Stratigraphic Phase: V Weight: 3.4g Dimensions: 2.4 x 1.8 x 0.8cm

Special find no: 896 Trench: Ch. VIII Context: 1011
Stratigraphic Phase: V Weight: 11.4g Dimensions: 3.8 x 2.6 x 1.2cm

Special find no: 1304 Trench: Ch. VI Context: 58
Stratigraphic Phase: V Weight: 8.9g Dimensions: 3.7 x 3.0 x 0.8cm

13.2.5 Persian blue speckled related

A well-represented class that consists exclusively of bowls, mostly with plain blue/turquoise glazed interiors and unglazed or partially-glazed exteriors, (although glazed exteriors are also common). Twenty-nine sherds of this group were recovered, 11 from Period V and 18 from Period VI. Particular concentrations occur in trench III where 16 sherds were found, 15 from Context 1, and in Trench VIII where 11 sherds were found. Sf 765 is the rim sherd from a bowl. The interior and exterior are covered with a thin white wash, a stippled and coarsely crazed deep blue/turquoise glaze with a speckled appearance. Sf 711 is the rim sherd from a bowl. The interior and exterior are covered with a thin white wash. The interior is covered with a stippled deep blue/turquoise coloured glaze that steps over onto the exterior stopping just bellow rim (8mm). The samples available bear a close resemblance to a well-known and securely dated class known as Persian Blue Speckled Ware (Kennet 2004: PERSIA) suggesting that they are part of a similar tradition. At al-Mataf 335 sherds of this were found dating to the 14th/15th century. Twenty-three sites with sherds of this class are represented in the Williamson Collection. They are distributed widely along the Iranian coast and at a few sites further inland. Similar sherds have also been found at Kilwa (Chittick 1974: 304, colour pl. II, fig. 91 o, pl. 112 c f), Shanga (Horton 1996: 293) and Fort Jesus (Kirkman 1974: 118–199, fig. 72: 9, 10 and 13) in East Africa. Differences in the fabric suggest that the sherds from Charsadda are local products that fit within this wider stylistic and technological tradition that may have originated in Iran. This group is probably a local production and belongs to Fabric 1.

Special find no: 7 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 0.4g Dimensions: 1.0 x 0.8 x 0.5cm

Special find no: 29 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 0.2g Dimensions: 1.0 x 0.6 x 0.4cm

Special find no: 188 Trench: Ch. III Context: 7
Stratigraphic Phase: VI Weight: 3.4g Dimensions: 2.5 x 2.4 x 0.6cm

Special find no: 231 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 91.2g Dimensions: 8.0 x 6.3 x 1.0cm, foot diameter: 6.8cm

Special find no: 238 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 5.0g Dimensions: 3.3 x 2.4 x 0.6cm

Special find no: 259 Trench: Ch. VI Context: 7
Stratigraphic Phase: VI Weight: 14.4g Dimensions: 5.7 x 2.4 x 0.85cm

Special find no: 266 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 1.8g Dimensions: 2.1 x 1.3 x 0.7cm

Special find no: 325 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 4.2g Dimensions: 2.3 x 1.7 x 1.1cm

Special find no: 348 Trench: Ch. VI Context: 58
Stratigraphic Phase: V Weight: 1.7g Dimensions: 2.8 x 1.8 x 0.5cm

Special find no: 356 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 1.8g Dimensions: 1.7 x 1.6 x 0.4cm

Special find no: 396 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 0.4g Dimensions: 0.9 x 0.8 x 0.4cm

Special find no: 420 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 0.3g Dimensions: 0.8 x 0.7 x 0.4cm

Special find no: 457 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 0.9g Dimensions: 1.0 x 0.8 x 0.4cm

Special find no: 459 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 0.3g Dimensions: 0.9 x 0.85 x 0.4cm

Special find no: 474 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 3.9g Dimensions: 2.9 x 1.4 x 0.8cm

Special find no: 478 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 0.3g Dimensions: 1.0 x 0.8 x 0.4cm

Special find no: 498 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 1.5g Dimensions: 2.5 x 1.5 x 0.5cm

Special find no: 506 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 13.3g Dimensions: 4.4 x 3.2 x 0.7cm

Special find no: 662 Trench: Ch. VIII Context: 1003
Stratigraphic Phase: V Weight: 34.8g Dimensions: 5 x 5 x 1.4cm; foot ring diameter: 4.6cm

Special find no: 702 Trench: Ch. VIII Context: 1009
Stratigraphic Phase: V Weight: 12.1g Dimensions: 4.2 x 3.3 x 0.8cm

Special find no: 711 Trench: Ch. VIII Context: 1012
Stratigraphic Phase: V Weight: 9.3g Dimensions: 4.2 x 2.8 x 0.7cm
(Colour Plate 1.4)
(Figure 13.1)

Special find no: 712 Trench: Ch. VIII Context: 1012
Stratigraphic Phase: V Weight: 11.5g Dimensions: 4.6 x 2.6 x 0.9cm.

Special find no: 763 Trench: Ch. VIII Context: 1010
Stratigraphic Phase: V Weight: 29.9g Dimensions: 6.6 x 4.8 x 0.65cm.

Special find no: 765 Trench: Ch. VIII Context: 1011
Stratigraphic Phase: V Weight: 3.5g Dimensions: 7.2 x 4.4 x 1.4cm
(Colour Plate 1.4)
(Figure 13.1)

Special find no: 778 Trench: Ch. VIII Context: 1000
Stratigraphic Phase: VI Weight: 11.4g Dimensions: 3.4 x 2.8 x 1.2cm.

Special find no: 807 Trench: Ch. VIII Context: 1003
Stratigraphic Phase: V Weight: 32.5g Dimensions: 7.1 x 4.4 x 0.9cm

Special find no: 811 Trench: Ch. VIII Context: 1003
Stratigraphic Phase: V Weight: 2.8g Dimensions: 3.5 x 3.5 x 0.7cm

Special find no: 845 Trench: Ch. VIII Context: 1015
Stratigraphic Phase: V Weight: 3.1g Dimensions: 2.9 x 1.8 x 0.65cm.

Special find no: 897 Trench: Ch. VIII Context: 1011
Stratigraphic Phase: V Weight: 9.5g Dimensions: 5.3 x 3.7 x 0.4cm

13.2.6 Monochrome white glazed ware

This group is represented by seven sherds, five from Period V and two from Period VI, from a range of contexts. All sherds are from bowls which are white slipped and glazed. Sf 744 is the body sherd from a bowl with heavily stippled opaque monochrome white glazed interior and exterior. There are no known parallels for this ware. For the dating see the discussion of the Fabric 1 group in general. These sherds are probably a local production and all belong to Fabric 1.

Special find no: 237 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 6.3g Dimensions: 4.8 x 2.3 x 0.6cm

Special find no: 331 Trench: Ch. VI Context: 45
Stratigraphic Phase: V Weight: 5.6g Dimensions: 3.5 x 2.2 x 0.5cm

Special find no: 354 Trench: Ch. VI Context: 41
Stratigraphic Phase: V Weight: 17.2g Dimensions: 4.1 x 2.6 x 0.5cm

Special find no: 505 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 8.0g Dimensions: 4.5 x 2.1 x 0.7cm

Special find no: 769 Trench: Ch. VIII Context: 1012
Stratigraphic Phase: V Weight: 16.4g Dimensions: 4.2 x 3.1 x 1.1cm

Special find no: 774 Trench: Ch. VIII Context: 1012
Stratigraphic Phase: V Weight: 2.3g Dimensions: 1.9 x 1.6 x 0.7cm
(Colour Plate 1.4)

Special find no: 863 Trench: Ch. VIII Context: 1020
Stratigraphic Phase: V Weight: 5.7g Dimensions: 2.8 x 1.7 x 0.7cm

13.2.7 Blue-on-purple underglaze painted ware

Only a single sherd of this group was found in a Period V context. Sf 803 is a thick body sherd from a bowl with crudely finished unglazed exterior. Interior painted with a simple design rendered in fast white slip-pigment under a transparent blue tinted glaze. This group clearly belongs to the underglaze-painted ware tradition and as such its dating and definition are closely related to the discussion already provided for the group in 13.2.4. In this case the decorative parallels with the blue-and-white or turquoise-and-black traditions are not so obvious. In fact this group resembles more closely a post-17th century ware found on lower Gulf coastal sites known as 'Red and Yellow Ware' (Kennet 1994: REDYEL), although a turquoise-on-black version is equally common. This connection is a superficial one, however, as the turquoise-on-black or purple effect is achieved using different techniques. The differences in the colour scheme probably obscure the close relationship that exists between this class and the underglaze-painted ware tradition. This sherd is probably a local production and belongs to Fabric 1.

Special find no: 803 Trench: Ch. VIII Context: 1010
Stratigraphic Phase: V Weight: 102.2g Dimensions: 11.8 x 5.2 x 1.4cm
(Colour Plate 1.4)

13.2.8 Monochrome turquoise frit

Only a single sherd of this group was recovered from a Period V context. Sf 714 is a body sherd from a closed vessel. Interior and exterior covered with a transparent turquoise alkali glaze. Monochrome Turquoise Frit (Kennet 2004: FRIT.T) is part of a long frit tradition originating either in Iran (Morgan 1994: 155–156) or Egypt (Contadini 1998: 73; Porter & Watson 1987; Tonghini 1994: 249). The earliest securely dated frit vessel comes from an Iranian vase in the Khalili collection, which is dated by an inscription to 1139–40 (Morgan 1994: 155–156), although the weight of opinion is increasingly that the technology was first developed in Egypt in the 11th century and that it was transferred to Iran somewhat later (Mason 1997: 133; Mason & Tite 1994). From the excavations in Ras al-Khaimah it has been possible to draw a distinction between an earlier group of mostly undecorated frits of the 11th–13th centuries, with their own particular set of forms, and a later group of mostly underglaze-painted frits, with thicker walls and forms paralleled in other wares that can be dated to the 14th century onwards. The sample from Charsadda certainly belongs to the latter. Unfortunately there is currently little information on the terminal date for this ware as frit continued to be produced into the 20th century (Wulff 1966: 165–167). One feels inclined to suggest that the majority of the later FRIT.T tradition probably belongs to the 14th–18th centuries and that this sherd fits within that period. At the moment very little is known about the scale of production of frit in general and FRIT.T in particular, across the Middle East, though the common occurrence of FRIT.T both in the Stein and Williamson Collections (136 sherds and 39 sites, and 30 sherds and 20 sites respectively), suggests that it may have been manufactured at more than one centre. This raises the possibility that production may have extended into Pakistan and that the single Charsadda sherd may be local. If this is the case then the single sherd of FRIT.T may represent the only imported glazed ware in the Charsadda assemblage. The sherd belongs to Fabric 4.

Special find no: 714 Trench: Ch. VIII Context: 1011
Stratigraphic Phase: V Weight: 6.8g Dimensions: Diameter 2.9cm, height 0.8cm
(Colour Plate 1.4)

13.2.9 Monochrome green sgraffiato

Three sherds from this group were recovered: two from Trench Ch. III, Context 1, Period VI and one from Trench VI, Context 64, Period V. All were monochrome green sgraffiato bowls with unglazed exteriors. Sfs 488 and 488b are two body sherds from bowls with white slipped interiors decorated with fine sgraffiato lines thinner than 1mm, and covered over with a bright copper-green glaze. The exteriors are unglazed, though on one sherd traces of white slip adhere to the upper portion of the sherd suggesting that it originally had slip and glaze covering part of the exterior. Monochrome Green Sgraffiato (Kennet 2004: GGRAF) is a well-known and reasonably well-dated class with a wide distribution. At Kush it was the most abundant class of sgraffiato between the late 11th and 13th centuries. GGRAF has also been found more locally at Lashkari

Bazar (Gardin 1963: Group XIII-1, pl. XXVIII, 525–530), where it was dated to the early part of the period from 1100 to 1220 AD, during the time when the market place when out of use (ibid: 136). It has also been found at Sirjan (Morgan & Leatherby 1987: 73–75, Group 3 Type A Style I with monochrome glaze) were it was dated, possibly too early, to between 950 and 1050 AD. In East Africa GGRAF has been found at a number of sites including Nzwani (Wright 1992: 94) and Shanga (Horton 1996: late sgraffiato f, g, h). The evidence from East Africa might indicate that GGRAF was in circulation before the end of the 11th century. GGRAF was also recovered during Wheeler's excavations at Charsadda in 1958 (Wheeler 1962: pl. 18 no. 7). GGRAF was recovered from 40 sites distributed widely through coastal and inland areas of Williamson's survey of southern Iran, although there is a concentration towards the eastern part of the survey in the province of Kerman. A further 10 sites were also identified in the Stein Collection with a concentration in Baluchistan, but with sites extending as far as western Azerbaijan (Stein, 1936; 1937; 1940). GGRAF appears to have been produced at a number of different centres in Iran and, although it is conceivable that the Charsadda material was brought in from Iran, slight traces of mica in the fabric indicate local manufacture, thereby suggesting an extension of production into Pakistan. All examples belong to Fabric 3.

Special find no: 458 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 3.8g Dimensions 3.4 x 2.2 x 0.6cm

Special find no: 473 Trench: Ch. VI Context: 64
Stratigraphic Phase: V Weight: 2.8g Dimensions 2.9 x 1.3 x 0.5cm

Special find no: 488 Trench: Ch. III Context: 1
Stratigraphic Phase: VI Weight: 5.8g Dimensions 3.0 x 2.0 x 0.6cm, 1.5 x 1.1 x 0.4cm
(Colour Plate 1.4)

13.2.10 Monochrome green glazed ware

This group was represented by a single sherd. Sf 684 is a base sherd from a bowl with an opaque acidic green coloured glaze covering the interior and exterior stopping above the foot. There appear to be no parallels for this distinctive acidic green/yellow opaque monochrome glaze ware tradition in Iran. Two sherds of a similar ware occur in the Williamson Collection and these were apparently imported from further east, most probably from the general area of Afghanistan/Pakistan, though this is not certain. The occurrence of this ware at Charsadda, using what appears to be a local fabric, goes some way towards supporting this conclusion. See also the discussion for 13.2.1 and the discussion of Fabric 1 for the dating. It is probably a local production.

Special find no: 684 Trench: Ch. VIII Context: 1083
Stratigraphic Phase: VI Weight: 3.9g Dimensions: 3.3 x 1.3 x 0.6cm
(Colour Plate 1.4)
(Figure 13.1)

13.2.11 Blue and purple on white underglaze painted ware

This group is represented by a single sherd. Sf 759 is the body sherd of a bowl. The interior and some of exterior are covered with a white slip ground and both surfaces with a clear coarsely crazed glaze. The interior is decorated with a rosette pattern in manganese purple and diffuse deep copper turquoise pigments. This group is part of the underglaze-painted ware tradition already discussed in relation to material from sections 13.2.4 and 13.2.7. Of all the underglaze-painted wares at Charsadda, this is the most closely related to the blue-and-white group with rosette motifs that is found widely in southern Iran, see the discussion above. The same class was also recovered during Wheeler's excavation at Charsadda in 1958 (Wheeler 1962: pl. 18 no. 6). It is probably a local production and belongs to Fabric 1.

Special find no: 759 Trench: Ch. VIII Context: 1010
Stratigraphic Phase: V Weight: 9.2g Dimensions: 4.1 x 2.2 x 1.8cm
(Colour Plate 1.4)

13.2.12 Modern bone china

Two sherds of modern bone china were also recovered from the excavations, one from Period VI and one from Period V.

Special find no: 610 Trench: Ch. VIII Context: 1000
Stratigraphic Phase: VI Weight: 3.2g Dimensions: 2.3 x 2.0 x 0.9cm

Special find no: 411 Trench: Ch. VI Context: 58
Stratigraphic Phase: V Weight: 4.0g Dimensions: 2.3 x 2.0 x 0.9cm

13.3 CONCLUSION

The majority of the classes described (9 out of 12) are made using the same fabric (Fabric 1). Although a wide range of decorative techniques and glaze types are represented in these classes, all appear to belong to a similar production tradition that is characteristic of the post-medieval period. What unites these classes is the predominance of glazed and often decorated bowls, with relatively thick walls on a crude oxidised fabric. There are also similarities in the low quality glazing, which is often crazed and pitted with a rather hard gloss distinct from tight-fitting more refined lead glazes that are found on this tradition's medieval antecedents. Some of the classes in Fabric 1 are not well known from the literature, particularly the monochrome-glazed groups (Sections 13.2.2, 13.2.6 & 13.2.10) or late blue/turquoise sgraffiato (Section 13.2.3), and this is probably because they are very localised productions. Underglaze-painted ware on the other hand appears to display a greater uniformity across a broad geographic area, although again there are local stylistic variations, of which Charsadda sections groups 13.2.1 and 13.2.7 are good examples. Closer stylistic similarities exist between sections 13.2.4 and 13.2.11 from Charsadda and common underglazed-painted wares from Iran, but the fabrics are notably different. In both cases the fabrics tend to be fairly coarse, densely fired and oxidised with crude surface finishing, but in Iran all are of a pale cream to pink tone, often with large gritty inclusions, whereas the Charsadda fabric is dark red with a heavily micaceous background. The latter feature is common to many of the wares originating in South Asia from east of Iran as far as India. Close parallels for the South Asian fabric type on underglaze-painted wares can also be found in the material found at Kumb B, Tump-i-Chah-Ghulam, Chihil-dukhtaran, Damin and Kuchagardan, all located in Iranian Baluchistan (Stein, 1937). Given the similarity of body and of glaze quality between these Charsadda glazed classes it seems reasonable to assign all of the Fabric 1 classes to the post-medieval period, probably to the 17th–19th centuries, based on the dating of those classes in this fabric that can be dated, namely the under-

glazed-painted wares (sections 13.2.7, 13.2.4 & 13.2.11) and Persian Blue Speckled (section 13.2.5), although the 14th–16th centuries cannot be completely ruled out on the basis of the dating evidence currently available. Only two classes are certainly of an earlier date: Monochrome Green Sgraffiato (section 13.2.9) of the 12th–early 13th century and Monochrome Turquoise Frit (section 13.2.8), probably of the 14th–16th century period, although a later date for the latter is possible. Other possible earlier material includes sherds of blue/turquoise sgraffiato (section 13.2.3) listed in the catalogue, but the sample available is made of Fabric 1 suggesting a later date.

In summary, none of the material discussed can be dated to before the later 11th/12th century, and most of it is considerably later and can be dated to between the 16th and the 19th/20th century. It should also be noted that there are no discernible differences between the assemblages from Periods V and VI, which suggests that the few earlier sherds are probably residual elements in contexts of a later date. It appears that after the 16th century the glazed wares used at Charsadda were locally manufactured but were inspired stylistically and technically by broader regional trends that stretched at least as far as Iran. If this was true for pottery it may also have been true for other products such as textiles and metalwork. During the 12th–13th centuries, however, there is some evidence of non-local imported glazed wares (sections 13.2.9 & possibly 13.2.8) that probably came from the north or the west, but which may also have been produced in Sind or other parts of Pakistan. It is not clear how much imported glazed ware was in use at Charsadda at this time, neither is it clear what proportion it made up of the total pottery assemblage, but it was quite possibly very limited. Certainly in earlier assemblages from Akra that are only slightly earlier only two out of 4,626 sherds were glazed (Petrie 2002: 352). It is worth noting that apart from the two sherds of Monochrome Green Sgraffiato (section 13.2.9), there are no parallels between the glazed pottery from Charsadda and the excavated assemblages from Lashkari Bazar in Afghanistan (Gardin 1963) and Sehwan Sharif in Sind (Kevran 1999), although these two sites both have very similar assemblages themselves. This lack of parallels appears to be due to the very limited amount of 12th and 13th century pottery that has so far been found at Charsadda, while Lashkari Bazar and Sehwan Sharif have much larger assemblages of this period. Although numerically limited, this assemblage provides some useful insights into the nature of medieval and post-medieval glazed wares in this area. Many of the groups that have been defined and described are probably very common on the ground, but because they are recent they are often ignored by archaeologists and therefore remain largely unknown. An understanding of how they were produced, distributed and how they developed can provide insights into the nature of production and distribution in the later periods (e.g. Petrie 2002), and can also reveal how closely this area was integrated into broader patterns of cultural integration and distribution systems through time.

	PERIODS	**II**	**III**	**IV**	**V**	**VI**	**Totals**
Green-on-yellow underglazed painted ware	no.				3	2	5
	wt. (g)				*41.4*	*10.9*	*52.3*
Monochrome yellow glazed ware	no.				2		2
	wt. (g)				*6.8*		*6.8*
Sgraffiato style ware	no.				8	7	15
	wt. (g)				*347.8*	*125.8*	*473.6*
Turquoise-on-white underglazed painted ware	no.				17	3	20
	wt. (g)				*262.7*	*43.4*	*306.1*
Persian blue speckled related wares	no.				*11*	*18*	*29*
	wt. (g)				*150.7*	*154.7*	*305.4*
Monchrome white glazed ware	no.				5	2	7
	wt. (g)				*47.2*	*14.3*	*61.5*
Blue-on-purple underglaze painted ware	no.				*1*		1
	wt. (g)				*102.2*		*102.2*
Monochrome turquoise frit ware	no.				1		*1*
	wt. (g)				*6.8*		*6.8*
Monochrome green sgraffiato ware	no.				1	2	3
	wt. (g)				*2*	*8.8*	*10.8*
Monochrome green glazed ware	no.					1	*1*
	wt. (g)					*9.2*	*9.2*
Blue and purple on white underglaze painted ware	no.				1		1
	wt. (g)				*9.2*		*9.2*
Modern bone china	no.				1	1	2
	wt. (g)				*4*	*3.2*	*7.2*
Totals	no.				51	36	87
	wt. (g)				*980.8*	*370.3*	*1351.1*

Table 13.1: Glazed ceramics

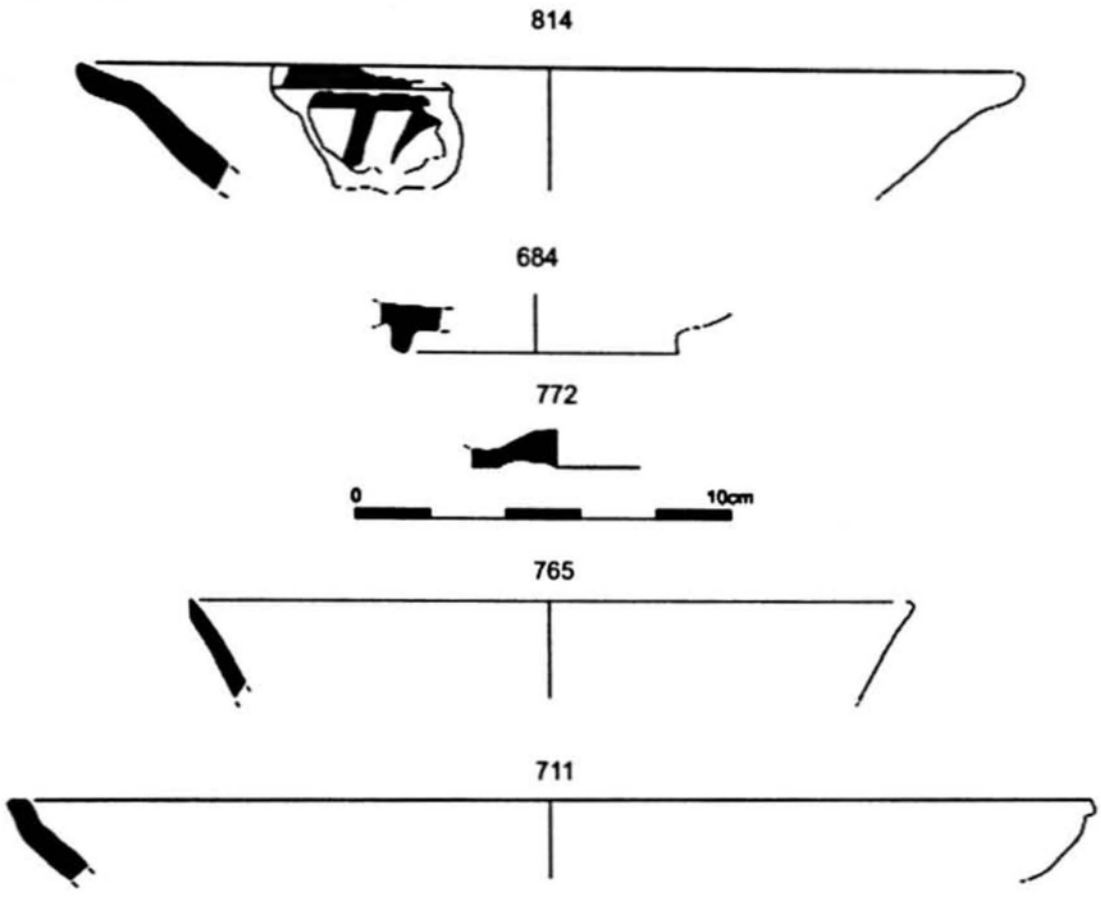


Figure 13.1: Glazed ceramics
Monochrome Yellow Glazed Ware base (Sf 772). Turquoise-on-White Underglaze-Painted Ware rim (Sf 814). Persian Blue Speckled related Ware rim (Sf 765). Persian Blue Speckled related Ware (Sf 711). Monochrome Green Glazed Ware base (Sf 684)

CHAPTER 14

THE IVORY, BONE AND SHELL OBJECTS

Robin Coningham

14.1 INTRODUCTION

A total of 38 objects of ivory, bone and shell were recovered from trenches Ch. III, VI and VIII/IX, weighing 76.5g (Table 14.1). Ivory objects accounted for the greatest weight (43.1g), followed by 21g of shell and 12.4g of bone. In terms of object categories, there were 16 bangle fragments, 10 beads, 2 worked objects and 10 shell fragments. Five of these objects (Sfs 965, 144, 1345, 500 & 1354) were recovered from 'in-situ' contexts, whilst the other 33 came from disturbed levels. A number of the in-situ objects came from Period II, including bone bead Sf 965, carved bone object Sf 1345 and shell fragments Sfs 500 & 1354, whilst ivory bangle Sf 144 was recovered from period III. Our evidence for the appearance of ivory from c. 770–410 BC (Period III) at the Bala Hisar matches well with its appearance in some of the earliest levels at the Bhir Mound (Marshall 1951: 652). Ivory pins were also recorded from the excavations at Timargarha and Balambat in the Dir Valley (Dani 1967: 187) but little of this material has been reported from the Swat Valley (Stacul 1987). Broken bone shaft Sf 1345 was recovered from contexts dating to between c. 1260–900 BC and probably belongs to the category of pin as recovered whole from the cemetery at Timargarha (Dani 1967: Plate XLVIII) as well as from Swat Period IV sites (Stacul 1987: Plate XXXVI). The presence of two fragments of shell (Sfs 1354 & 500) in early Period II contexts is also mirrored in the northern valleys with shell bangles and pierced cowries recovered from Period IV levels at Ghaligai and Bir-kot-ghwandai (Stacul 1987: 223) as well as from Balambat in Dir (Dani 1967: 281). Unattributable to individual animal species, the bone objects may have been manufactured from the abundant resources available at the site as discussed in Chapter 16, and although there is evidence of cut marks on animal bone, there is little evidence of their carving or processing. Other artefacts have more exotic sources such as the cowrie shells, marine bivalves and gastropods, which were probably transported from the coastline of the Arabian Sea (Kenoyer 1998: 94). The source of the ivory is less clear, but Lahiri has suggested that the ivory from this region may have come from the province of Sindh (Lahiri 1992: 281). This chapter has been organised by material and then each material is subdivided by artefact category.

14.2 IVORY OBJECTS

As noted above, ivory represented the largest category with a weight of 43.1g included ten bangle fragments and one bead. Only one ivory artefact, bangle fragment Sf 144 ,was recovered from an 'in-situ' context, from within one of the fills of Period III ditch cut 2. Sf 144 is an incomplete example and may even be unfinished as it has quite visible saw marks, suggesting that the final process of polishing had not yet been carried out. The Period III ditch cut has been dated to c. 770–410 BC. The only other ivory bangles of note are Sfs 1347, 1343 & 345. The former of which is decorated with incised floral and triangular design with traces of red pigment and Sf 1343 with a raised central band with an incised cross-hatching pattern. Although recovered from disturbed contexts, analogies may be made between Sf 1343 and an ivory example from Sirkap's Stratum II (Marshall 1951: 653) but analogies for Sf 1347 are more difficult with none at Taxila (Marshall 1951; Sharif 1969), Shaikhan Dheri (Dani 1966) or in the northern valleys (Stacul 1987). It is very possible that Sf 1347 has come from the upper levels of the mound as later incised floral designs are found on shell bangles at Shaikhan Dheri (Dani 1966: 131). Bangle Sf 345 has two grooves running round either extreme of the bangle face and a central decoration of raised knobs and, again has no close analogies. Another ornately carved object was bead Sf 368 from the disturbed levels of Period V. A barrel-shaped bead, it is highly decorated with horizontal bands separating cross-hatched zones made up of incised lines, possibly from saw cuts but as it is out of context, it is difficult to cite exact analogies.

14.2.1 Ivory bangles

Special find no: 144 Trench: Ch. VI Context: 16
Period: III Weight: 2.4g
Description: Incomplete bangle of ivory. Ridge running slightly to one edge of the outer surface. Straight facets run from the edges to the top of the ridge. Saw marks visible, possibly an unfinished piece?
Dimensions 7.5% survives; 9cm diameter, 0.8cm wide, 0.6.cm thick.
Comments: Irregular pentagon in cross section.

Special find no: 186 Trench: Ch. VI Context: 35
Period: V Weight: 5.6g
Description: Incomplete bangle of ivory. Bangle has ridges running at either edge of the outer surface. Possibly part of a composite object? One end is polished and rounded. Hole is drilled at one end (not rounded end); it runs through from the outer to the inner surface at a 45 degree angle.
Dimensions 17.5% survives; 6cm diameter, 1.3cm wide, 0.66cm thick.
Comments: C-shaped cross section.

Special find no: 699 Trench: Ch. VIII Context: 1010
Period: V Weight: 11.8g
Description: Incomplete bangle of ivory. Irregular in form, worked and exhibiting pronounced curvature.
Dimensions 12.5% survives; 14cm diameter, 2.1cm wide, 1.2cm thick.
Comments: Oval cross section.

Special find no: 871 Trench: Ch. VIII Context: 1019
Period: V Weight: 5.2g
Description: Incomplete bangle of ivory. On outer surface are three ribs, one at either edge,

and one at the middle.
Dimensions **10% survives; 6cm diameter, 2.4cm wide, 0.5cm thick.**
Comments. **Ribbed cross section.**
(Plate 14.1)

Special find no: **1342** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **1.4g**
Description. **Incomplete opaque bangle of ivory. Wider at one end than at the other.**
Dimensions: **6.25% survives; 9cm diameter, 0.52cm wide, 0.59cmthick.**
Comments: **Square-shaped cross section.**

Special find no: **1343** Trench: **Ch. VIII** Context: **1010**
Period. **V** Weight: **2.9g**
Description. **Incomplete opaque bangle of ivory. Semi circular ridge at centre of outer surface with incised pattern.**
Dimensions **15% survives; 14cm diameter, 1.16cm wide, 0.39.cm thick.**
Comments. **Rectangular-shaped cross section with semi circular mound on outer surface.**
(Figure 14.1)
(Plate 14.1)

Special find no: **1344** Trench: **Ch. VIII** Context: **1012**
Period. **V** Weight: **4.5g**
Description. **Incomplete opaque bangle of ivory. Wider in the middle, than at the ends.**
Dimensions **7.5% survives; 17cm diameter, 0.94cm wide, 0.4.cm thick.**
Comments. **Oval-shaped cross section.**

Special find no: **1345** Trench: **Ch. III** Context: **1**
Period. **VI** Weight: **2.7g**
Description. **Incomplete opaque bangle of ivory. Two parallel grooves at either side of the bangle with a central decoration of knobs in the centre of outer surface.**
Dimensions **Unknown diameter, 1.1cm wide, 0.39.cm thick.**
Comments. **Rectangular-shaped cross section with semi circular mound on outer surface.**
(Plate 14.1)

Special find no: **1346** Trench: **Ch. VIII** Context: **1001**
Period. **V** Weight: **2.9g**
Description. **Incomplete opaque bangle of ivory.**
Dimensions **25% survives; 6cm diameter, 0.57cm wide, 0.5cm thick.**
Comments. **Triangular cross section at one end, square at the other.**

Special find no: **1347** Trench: **Ch. VIII** Context: **1014**
Period. **V** Weight: **2.6g**
Description. **Incomplete opaque bangle of ivory. Highly decorative with traces of red pigment between floral and triangular incised designs.**
Dimensions **12.5% survives; 9cm diameter, 0.94cm wide, 0.4.cm thick.**
Comments. **Wedge-shaped cross section.**
(Figure 14.1)
(Colour Plate 1.3)

14.2.2 Ivory beads

Special finds no: **368** Trench: **Ch. VI** Context: **58**
Period. **V** Weight: **1.1g** Dimensions **2.1 x 0.77cm**
Hole Diam. **0.2cm**
Description. **Ivory barrel bead. Highly decorated with horizontal bands separating cross-hatched zones made up of incised lines, possibly from saw cuts. Hole runs through the centre of the bead; both ends are broken.**
(Plate 14.1)
(Figure 14.1)

14.3 BONE OBJECTS

A total of 11 bone objects were recovered (12.4g). These included two carved objects (Sfs 1121 & 1345), three bangles (Sfs 49, 70 & 1349) and five beads (Sfs 211, 243, 475, 965, & 996). Two of these objects were recovered from Period II: carved bone length Sf 1345 and bone barrel bead Sf 965 with dates of c. 1260–900 BC and c. 1210–1020 BC, respectively. The first of these (Sf 1345) is a 2.19cm long rounded bone shaft with a diameter of 0.43cm and broken at both ends. Its shape is very reminiscent of the bone pins or ornaments recovered from a number of the sites within the northern valleys and include Swat Period IV bone pins from Bir-kot-ghwandai and Aligrama (Stacul 1987: Plate XXXVI) as well as ivory pins from Timargarha (Dani 1967: Plate XLVIII). Our second carved bone object (Sf 1121) which comprises a broken length of rounded shaft with a pinched terminal which is flat-headed. Although out of context, Sf 1121 also shares many of these traits and is very similar to ivory pin no. 8 from Timargarha (Dani 1967: Plate XLVIII), although bone pins were also recorded by Marshall at the Bhir Mound and Sirkap (Marshall 1951: 656). The remaining bone artefacts are not particularly diagnostic and were recovered from disturbed levels.

14.3.1 Bone objects

Special finds no: **1121** Trench: **Ch. VIII** Context: **1002**
Period: **V** Weight: **0.6g** Dimensions: **3.22 x 0.6 x 0.6cm**
Description: **Bone linear object, with ornate cap at one end. Instrument or pin. Opaque brown and white in colour.**
(Figure 14.1)
(Plate 14.2)

Special finds no: **1345** Trench: **Ch. VI** Context: **71**
Period. **II** Weight: **0.4g** Dimensions: **2.19 x 0.43 x 0.43cm**
Description: **Bone linear object, possibly linear shaft of instrument or pin.**

14.3.2 Bone bangles

Special find no: **49** Trench: **Ch. III** Context: **1**
Period. **VI** Weight: **0.4g**
Description. **Incomplete bangle of bone.**
Dimensions **3.25% survives; 10cm diameter, 0.7cmwide, 0.3cm thick.**
Comments. **Oval in cross section.**

Special find no: **70** Trench: **Ch. VI** Context: **7**
Period. **VI** Weight: **0.7g**
Description. **Incomplete opaque bangle of bone, brown in colour.**
Dimensions. **3.12% survives; 17cm diameter, 0.60cm wide, 0.53cm thick.**
Comments. **Square with rounded edges in cross section.**

Special find no: **1349** Trench: **Ch. VIII** Context: **1**
Period. **VI** Weight. **7.3g**
Description. **Incomplete opaque bangle of bone.**
Dimensions **25% survives; 6cm diameter, 1.19cm wide, 0.63cm thick.**
Comments. **Rectangular-shaped cross section.**

14.3.3 Bone beads

Special finds no: **211** Trench: **Ch. VI** Context: **1**
Period: **VI** Weight. **0.3g** Dimensions **0.6 x 0.5cm**
Hole Diam: **0.15cm**
Description. **Bone barrel-shaped bead, broken into two fragments at one end, along the grain at right angles to the vertical piercing.**

Special finds no: **243** Trench: **Ch. III** Context: **1**
Period: **VI** Weight. **0.4g** Dimensions. **0.55 x 0.66cm**
Hole Diam. **0.16cm**
Description. **Bone barrel-shaped bead. Chamfered ends with one slightly pitted round the edges.**

Special finds no: **475** Trench: **Ch. III** Context: **1**
Period. **VI** Weight. **0.8g** Dimensions. **0.65 x 0.90cm**
Hole Diam. **0.10cm**
Description. **Bone bead, irregular in shape. Rough finish, could be unfinished. Hole offset.**

Special finds no: **965** Trench: **Ch. VIII** Context: **1051**
Period. **II** Weight. **0.2g** Dimensions. **0.45 x 0.45cm**
Hole Diam. **0.10cm**
Description. **Bone-barrel shaped bead, circular in cross section, chamfered at both ends.**

Special finds no: **996** Trench: **Ch. VI** Context: **1048**
Period. **VI** Weight. **0.6g** Dimensions. **0.7 x 0.7cm**
Hole Diam. **0.17cm**
Description. **Bone barrel-shaped bead, square in cross section, with hole slightly offset to one side. Chamfered at both ends.**

14.4 SHELL OBJECTS

A total of 16 shell artefacts (21g) were recovered from the Bala Hisar of Charsadda. These comprised 3 shell bangles, 3 shell beads and 10 shells. Two of the 16 shells, apparently unaltered marine shell fragments, were recovered from within Period II (Sfs 1354 & 500). The former came from the fill of a pit cut during the final phases of 'in-situ' occupation in the vicinity of trench Ch. VIII and sealed by a context dating between c. 1190 and 770 BC. The latter, a marine bivalve fragment, came from the mudbrick melt of wall 71 in trench Ch. VI and dates to between c. 1260 and 900 BC. All three shell bangles (Sfs 37, 1348 & 1350) appear to have been made of *Turbinella pyrum*, which is accessible along the Makkran coast (Kenoyer 1988: 92). Other shells represented include seven cowries of the *Erosaria* species and two unidentified freshwater mollusc shells, but all were from disturbed contexts reducing their importance.

14.4.1 Shell bangles

Special find no: **37** Trench **Ch. III** Context: **1**
Period: **VI** Weight: **1.5g**

Description: **Incomplete bangle of opaque shell. Rough outside edge.**
Dimensions **7% survives; 8.0cm diameter, 0.9cm wide, 0.34cm thick.**
Comments: **Oval shaped cross section.**

Special find no: **1348** Trench: **Ch. VIII** Context: **1014**
Period: **V** Weight: **3.1g**
Description: **Incomplete opaque bangle of shell. Curved inside edge with remains of shell lining. At one end, wider than at the other.**
Dimensions **15% survives; 6cm diameter, 0.52cm wide, 1.15cm thick.**
Comments: **Rectangular cross section.**

Special find no: **1350** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **2.5g**
Description: **Incomplete bangle of shell. On outer surface, surface rises from edges, then dips towards the middle of the surface.**
Dimensions **Fragment survives; N/A cm diameter, 1.48cm wide, 0.34cm thick.**
Comments: **Flat cross section.**

14.4.2 Shell beads

Special finds no: **389** Trench: **Ch. VI** Context: **58**
Period: **V** Weight: **0.6g** Dimensions: **1.44 x 0.88 x 0.59cm**
Description: **Fragment of pierced cowry shell.**

Special finds no: **873** Trench: **Ch. VIII** Context: **1018**
Period: **V** Weight: **9.3g** Dimensions: **2.0 x 2.0 x 1.5cm**
Description: **Irregular white shell bead, triangular in shape with cut mark from one apex of the triangle, to the middle of the bead.**
(Plate 14.2)

Special finds no: **972** Trench: **Ch. IX** Context: **1035**
Period: **VI** Weight: **0.8g** Dimensions: **1.52 x 1.15 x 0.51cm**
Description: **Pierced cowry shell.**
(Plate 14.2)

14.4.3 Shells

Special finds no: **103** Trench: **Ch. VIII** Context: **1015**
Period: **V** Weight: **0.1g** Dimensions: **1.00 x 0.82 x 0.27cm**
Description: **Half of freshwater mollusc shell.**

Special finds no: **351** Trench: **Ch. VI** Context: **38**
Period: **V** Weight: **0.3g** Dimensions: **1.49 x 0.52 x 0.52cm**
Description: **Fragment of cowry shell.**

Special finds no: **376** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.4g** Dimensions: **1.05 x 0.84 x 0.83cm**
Description: **Fragment of gastropod sea marine shell with core removed. Possible bead?**

Special finds no: **408** Trench: **Ch. VI** Context: **58**
Period: **V** Weight: **0.2g** Dimensions: **1.25 x 0.38 x 0.31cm**
Description: **Fragment of shell.**

Special finds no: **428** Trench: **Ch. III** Context: **1**
Period: **VI** Weight: **0.3g**
Dimensions: **1.38 x 0.65 x 0.59cm**
Description: **Fragment of cowry shell.**

Special finds no: **500** Trench: **Ch. VI** Context: **71**
Period: **II** Weight: **1.0g** Dimensions: **1.86 x 1.21 x 0.37cm**
Description: **Fragment of freshwater mollusc shell.**

Special finds no: **1351** Trench: **Ch. VI** Context: **58**
Period: **V** Weight: **0.2g** Dimensions: **1.04 x 1.04 x 0.77cm**
Description: **Fragment of cowry shell.**

Special finds no: **1352** Trench: **Ch. VI** Context: **58**
Period: **V** Weight: **0.2g** Dimensions: **1.56 x 1.55 x 0.51cm**
Description: **Fragment of cowry shell.**

Special finds no: **1353** Trench: **Ch. VI** Context: **58**
Period: **V** Weight: **0.3g** Dimensions: **1.40 x 0.53 x 0.63cm**
Description: **Fragment of cowry shell.**

Special finds no: **1354** Trench: **Ch. VIII** Context: **1043**
Period: **II** Weight: **0.2g** Dimensions: **1.42 x 1.12 x 0.12cm**
Description: **Fragment of shell.**

14.5 CONCLUSION

As with many of our artefact categories, the vast majority of the ivory, bone and shell objects were recovered from disturbed layers. It should be remembered, however, that the main aim of conducting fresh fieldwork at the Bala Hisar of Charsadda was in order to focus on the antiquity of its earliest occupation. That focus allows us to draw parallels between the artefacts from the basal levels of the Bala Hisar and artefacts from the valleys of Swat and Dir. In particular, bone shaft Sf 1345 was recovered from contexts with a date of c. 1260–900 BC and has very close links with the bone and ivory cut bones and shafts found within cemeteries and settlements cut within the Dir and Swat valleys (Stacul 1987: Plate XXXVI; Dani 1967: Plate XLVIII). The same may be stated of Sf 1121, another bone pin, which shares close parallels with individual objects from Timargarha (Dani 1967: Plate XLVIII). As a result, we can support Stacul's suggestion that by Swat Period IV, there were interregional networks of trade (Stacul 1987: 75). At the Bala Hisar of Charsadda we find a pattern where locally available resources, such as bone, were utilised alongside more 'exotic' materials such as ivory and marine shell. This pattern is also found within the stone artefacts from the site as noted in Chapter 11. It should be noted that we have found no direct evidence of marine shell cores or of bone, shell or ivory off-cuts and wasters, indicating that processing was carried out on site. Indeed, that we have only one artefact, Period III ivory bangle Sf 144, which may be partially unfinished, suggests that objects were brought to the Bala Hisar of Charsadda complete. This pattern is very similar to the pattern of semi-precious stone objects (see Chapter 11), which are only present in completed forms with an almost complete absence of semi-processed examples or debitage. This pattern is very different from Marshall's discovery of fragments of cut shell indicating the presence of a shell-working locality at the Bhir Mound (Marshall 1951: 92). Again, it suggests that the role of the settlement at the Bala Hisar of the Bala Hisar was not in the acquisition and processing of raw materials.

	PERIODS	II	III	IV	V	VI	TOTALS
Ivory bangles	no.		1		7	2	10
	wt. (g)		*2.4*		*35.5*	*4.1*	*42*
Ivory beads	no.				1		1
	wt. (g)				*1.1*		*1.1*
Ivory total	no.		1		8	2	11
	wt. (g)		*2.4*		*36.6*	*4.1*	*43.1*
Bone objects	no.	1			1		2
	wt. (g)	0.4			*0.6*		*1*
Bone bangles	no.					3	3
	wt. (g)					*8.4*	*8.4*
Bone beads	no.	1			2	3	6
	wt. (g)	*0.2*			*1.3*	*1.5*	*3*
Bone total	no.	2			*3*	6	11
	wt. (g)	0.6			*1.9*	*9.9*	*12.4*
Shell bangles	no.				1	2	*3*
	wt. (g)				*3.1*	*4*	*7.1*
Shell beads	no.				2	1	3
	wt. (g)				*9.9*	*0.8*	*10.7*
Shells	no.	2			6	2	10
	wt. (g)	1.2			*1.3*	*0.7*	*3.2*
Shell total	no.	2			9	5	16
	wt. (g)	1.2			*14.3*	*5.5*	*21*
TOTALS	no.	4	1		20	13	38
	wt. (g)	*1.8*	*2.4*		*52.8*	*19.5*	*76.5*

Table 14.1: Ivory, bone and shell objects

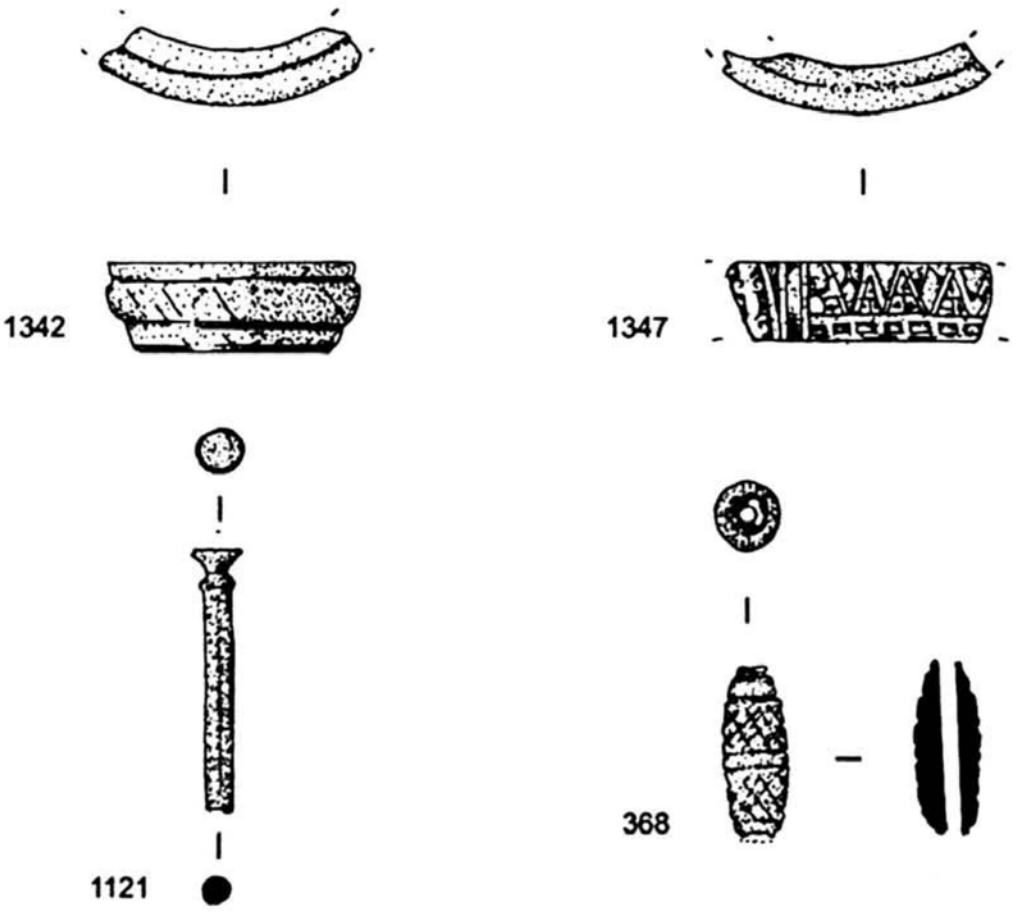


Figure 14.1: Ivory and bone objects (1:1)
Ivory bangles (Sfs 1343 & 1347). Ivory barrel bead (Sf 368). Bone pin (Sf 1121) (scale 1:1)

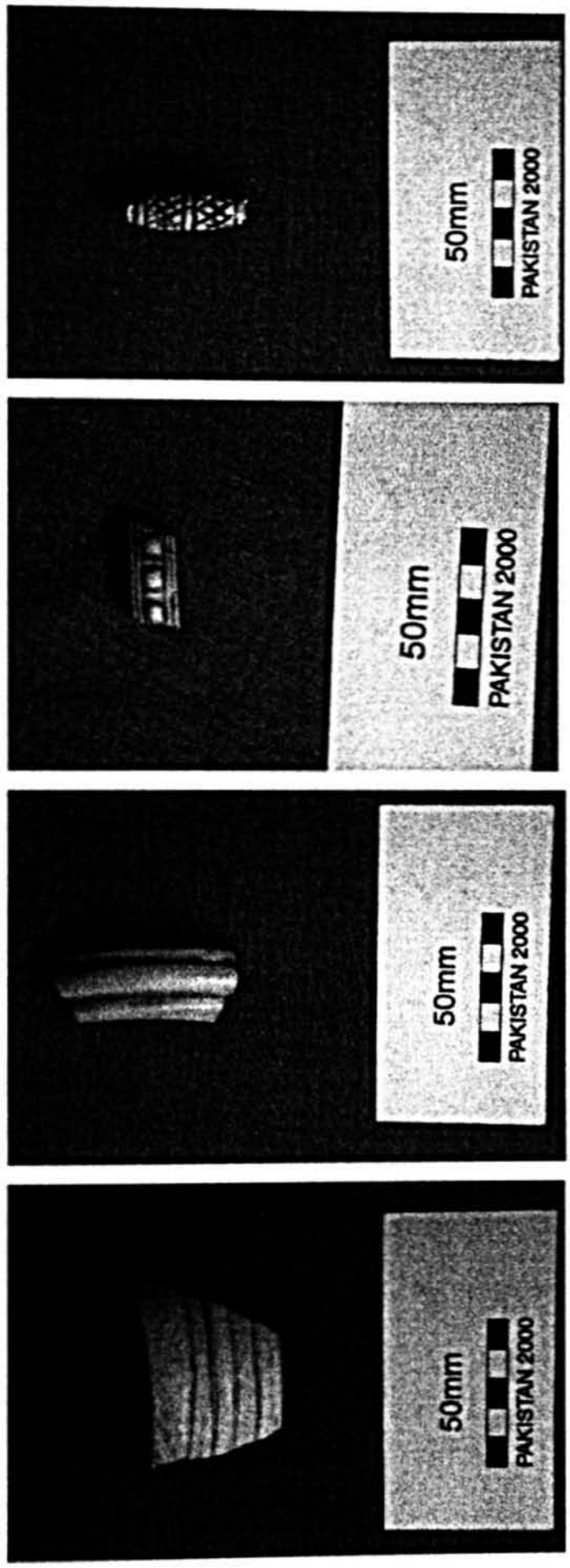


Plate 14.1: Ivory and bone objects
Ivory bangles (Sf 871, 1343 & 1345). Ivory barrel bead (Sf 368)

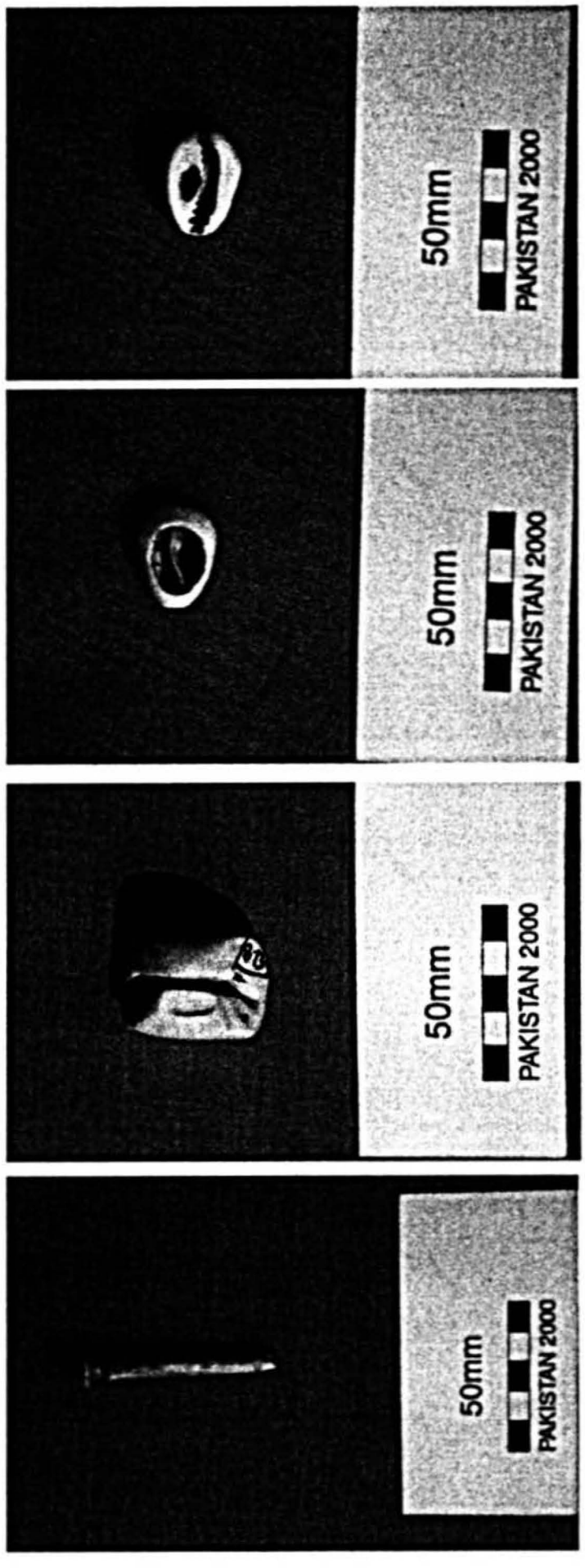


Plate 14.2: Ivory and bone objects
Bone pin (Sf 1121). Shell bead (Sf 873). Cowry bead (Sf 972) (front and rear)

CHAPTER 15

THE ARCHAEOBOTANICAL REMAINS

Ruth Young

15.1 INTRODUCTION

Archaeological plant remains can be of great use in understanding two major areas of past activity: environmental conditions and subsistence. While the wider research question at Charsadda focused on issues of absolute dating and understanding the so-called defensive system, the opportunity to collect samples for archaeobotanical analysis was considered worth exploiting. To date, relatively little in the way of environmental data has been systematically collected and analysed from sites in the North West Frontier Province (with the major exception of work in the Bannu Basin by Thomas 1983; 1986a; 1986b). There are a number of reasons for this situation, including the dominance of culture historical and chronological concerns as driving forces in the research agenda (Young 2003: 4). However, the study of environmental material can provide unique and important insights into different aspects of life in the past, and it is only by continued analysis demonstrating this, that widespread sampling and study of plant and animal remains will become routine in this region.

15.2 METHODOLOGY

Plant macro-remains were collected by hand from contexts where a concentration of burnt material was noted (either wood charcoal or burnt grain), or from contexts where burnt material was noted but in less concentrated amounts. From the latter, approximately two litres of soil was collected and wet seived, and the resulting residue sorted by hand using a low powered microscope. Seeds were identified using a combination of published and reference material, comparing the morphology of the modern and archaeological material (Zohary and Hopf 1988; Thompson 1996; Schoch *et al.* 1988). All the material examined and listed in Table 15.1 was charred, although a further two pieces of archaeobotanical evidence are discussed below (Section 15.8). Wood charcoal was examined using light microscopy following standard procedures (Leney and Casteel 1975) and identified using a combination of published and reference material and a computerised key (Ilic 1987, 1991, 1999). In order to achieve statistically significant results, it is generally considered necessary to have appropriate sampling strategies for both macro and micro plant remains (e.g. van der Veen & Fieller 1982). It is also recognised, however, that quantitative analyses might not be appropriate for small samples collected under less than ideal conditions, or for small assemblages (Pearsall 1989: 195–196). Research by Hubbard and Clapham (1992: 119) has shown that unless samples have been taken from well defined and completely secure contexts, carrying out complex analyses is likely to be worthless. Many archaeological features such as ditch and pit fills, which are frequently sampled as a potential source of archaeobotanical information, are likely to be mixed in nature. Therefore, the archaeobotanical assemblage from Charsadda has been identified and recorded, but analysis other than noting presence and absence is not really possible. This alone, however, is sufficient to allow us to begin to build up a picture of subsistence in this region, and importantly, to compare Charsadda with other sites in the immediate region and beyond.

15.3 THE CHARRED ARCHAEOLOGICAL PLANT REMAINS

Table 15.1 lists all the plant remains that have been recovered and identified from the archaeological contexts at Charsadda. These contexts are all from Trenches VIII and IX, which were excavated in order to address stratigraphic and chronological questions (see Chapter 6), and contexts 1031–1073 are dated to Phase II, while contexts 1003, 1012, 1017 and 1095 are dated to Phase V. Table 15.2 summarises the relevant context information for ease of reference.

Many of the later contexts from all trenches have been exposed to both mixing and robbing. It is clear from Table 15.2 that material from contexts 1003 to 1017, plus context 1095 are not suitable for analysis, even though they contain charred archaeobotanical material. Disappointingly, this means that we cannot include the large clumps of burnt rice grain and husk from contexts 1003, 1012 and 1017; nor can we include the wood charcoal from context 1095. We do, however, have material from contexts 1031–1073, dated to Phase II of the site, which is from archaeologically sound deposits. Given that they are all within Trench VIII, which, as noted above, was located specifically to learn more about the occupation sequence at Charsadda, means that we have seven samples of weed seeds and cereal grains, and two samples of wood charcoal that will enable us to gain a preliminary understanding of subsistence issues and wood exploitation on this site.

15.4 SEEDS

Only three food plants have been identified at Charsadda: rice (*Oryza* cf. *sativa* L.) (Thompson 1996: 164–183),

lentil (*Lens culinaris* Medik) (Renfrew 1973: 113–155; Zohary & Hopf 1988: 85–92), and wheat (*Triticum* spp. L.) (Zohary & Hopf 1988: 16–28), which is a surprisingly narrow range. Of these, wheat and lentils are found within the earlier part of Phase II, in the second millennium BC, while rice appears to be a slightly later occurrence in the early first millennium BC. Both lentil and wheat are winter or *rabi* crops, sown in late autumn and harvested in spring, while rice is a summer or *kharif* crop, sown in spring and harvested in autumn. Today, wheat can be grown as both a winter and summer crop around Charsadda due to irrigation, but many farmers continue to sow it in October and harvest in April (Young 2003: 70). Rice is not grown around Charsadda today, but is grown in some quantity in the valleys of Swat and Dir, to the north of the Vale of Peshawar (ibid: 21, 69). One notable absence from the identified plant remains is barley. Barley is known to be a rather more hardy cereal crop than wheat (Thomas 1999: 315, 317), and certainly in South Asia, is considered more suited to animal than human food, especially when wheat is available (Weber 1999: 823). The significance of this will be explored further below, in the sections comparing the Charsadda plant assemblage to that of selected Harappan and Swat sites.

Another absence from the assemblage is chaff or cereal waste products; only grains were recovered, and although weed seeds were identified, these were found in only three of the seven contexts that actually contained pulses or cereals. The weeds identified are all very common and associated with disturbed ground, rather than being weeds of cultivation. This means that they could simply be 'background noise' in terms of plant use at Charsadda, i.e. they grow so commonly and widely that they are likely to arrive on site by a whole range of means and being charred, become incorporated in archaeological deposits (Minnis 1981; Weber 1991: 16–19). Fuller, in his excellent summary of changing archaeobotanical interpretation (2002) suggests that the absence of chaff within an assemblage may be due to preservation issues, and that the presence of weed seeds is more likely due to human manipulation of crop plants on site than background seed rain. In terms of the producer-consumer debate with regard to site function (Hillman 1981; 1984; Jones 1985 and others) based on the presence, absence and quantities of elements such as chaff and certain weed seeds, the arguments put forward by Fuller (2002) in a particularly South Asian context remain convincing. He says that the lack of processing evidence may be simply because it is occurring in other areas of a site, and further, that ethnographic observation in many South Asian villages show that it would be surprising if some degree of crop processing was not carried out. When we consider this argument at Charsadda we are faced with two main issues: the assemblage is too small at present to be able to note changes over time in composition; and we are still unable to determine at what point Charsadda moves beyond a village or town where local processing of local crops would be expected, to become the sizeable urban area it is in later phases when on-site crop processing would be far less likely.

15.5 WOOD CHARCOAL

Wood charcoal was recovered from three contexts in sufficient quantity to allow identification, but of these only two (1065 and 1073) are secure deposits. The third (1095) is the fill of robber pit 1024. Five tree types in total were identified: acacia, shisham, mulberry, olive and deodar. Olive and acacia trees and shrubs are known throughout the Province today, being well suited to the typically arid conditions of much of the region (Edlin *et al.* 1978: 202; Mabberley 1987: 2, 408; Roberts 1997: 11). While irrigation is extremely important around the Charsadda area today for the growth of sugar cane, wheat and fruit trees, we have no archaeological evidence for irrigation in the past. Useful sources of information for the district are regional Gazetteers, a product of British rule and the desire to quantify land and people. From these we learn that in the late nineteenth century tree cover differed in type and abundance across the province, largely reflecting the altitude and the rain cover. Acacia, mulberry, zizyphus and caparis were noted on areas of waste land, while on lower hills, such as those around the Vale of Peshawar, wild olive trees, oleander and poplar grew (Punjab Government 1897–98, 35–38; see also Chapter 2). The presence of fruits such as apricot, fig, pomegranate and grape vines in low lying areas were solely due to irrigation, and trees such as pine, ash and deodar were found only in the higher hill and mountain foothills to the north (ibid.), and indeed parts of Swat and Dir are today almost the last areas of coniferous forest in Pakistan (Roberts 1997: 10).

In terms of our identified archaeological wood, we are therefore able to place each type within its natural range. Acacia species of either scrub or tree thrive in arid and semi-arid conditions as found in the Vale of Peshawar, and the leaves of some types make good grazing for herds. Shisham, or rosewood, is high-quality timber much prized in South Asia today, and is found below 900m, generally near riverbanks, suggesting that it may well have been growing naturally near the site, given its riverine location. Mulberry (also sometimes known as shisham), is likely to have been growing in the more arid hill regions to the south of the Vale itself. The leaves of mulberry trees are also known to be used as browse for ruminants. As the species of mulberry has not been determines, it may of course be from a more northerly growing type. Wild olive species, like acacia, grow well in arid areas, often occurring as scrub cover where other trees are sparse. Deodar is another important timber tree in South Asia (as well as being prized for its appearance), and it grows in the valleys of Swat and Dir to the north of Charsadda (Edlin *et al.* 1978; Mabberley 1987; Roberts 1997). All this suggests that while olive and acacia, and possibly shisham were growing near the site and were readily available, mulberry and deodar were almost certainly being obtained from further away, to the south and north respectively. Although there is always the further possibility that the mulberry type wood was from a species that originated to the north or east of the area, possibly even in the Himalayas where mulberry is well known. Again, larger samples from a wider range of secure deposits would be needed to pursue

this issue and understand more about wood selection and use at Charsadda.

15.6 URBAN CHARSADDA AND URBAN HARAPPA: A COMPARISON OF PLANT MATERIAL

The Early Historic city of Taxila is clearly a site with many parallels to Charsadda: both identified as capitals of the Persian satrapy Gandhara, both located on important trade routes, and both located within potentially fertile land in the north west (Allchin 1993: 70; Marshall 1951: 1–3). Further, radiocarbon dates from both sites (see Chapter 7; Allchin 1993; Young 2003, 41) show a significant overlap between occupation at the different urban foci at each site. However, we know very little about direct environmental material from Taxila, although Marshall has published evidence for agriculture in the form of querns, grinding stones and socketed hoes from Bhir Mound (Marshall 1951: 485, 559). Therefore, in the absence of suitable assemblages from the Taxila sites, we need to turn to other sources for environmental material from urban sites in this region, so that the material can be compared to that of Charsadda and perhaps even used as a potential interpretative model. The Harappan state system is somewhat different to the Early Historic urban period in terms of social organisation and development. While the mature or integrated Harappan spans the period c. 2500 to 1900 BC, the Bala Hisar of Charsadda is thought to have been first settled around 1400 BC (Chapter 7), and developed and expanded over the succeeding millennia. However, there has been a considerable amount of work carried out on urban Harappan sites which has produced a useful body of environmental data and interpretation. In particular, the work by Weber (1991; 1992; 1999) at urban Harappan sites is very important, and offers some very interesting conclusions which we can consider alongside the Charsadda material.

Weber (1999) shows that during the integrated period at Harappa itself, a very narrow range of cereal types was recovered, and wheat dominated the assemblage, along with other winter crops. Barley was recovered as well as wheat, but during this major urban phase, wheat was clearly the most significant cereal. The explanation for this lies largely in the separation of function which is a clear factor in increasing social complexity; Weber says that as the urban area and population increases, agricultural activity is divorced both physically and socially, and crops are moving over ever greater distances. This, he believes, accounts for the narrow range of plant types and also the presence of human food crops (wheat) in greater quantity than animal food crops (barley) (1999: 823). Weber's presentation of the archaeobotanical assemblage from Harappa shows that there are similarities to the Charsadda assemblage: the narrow range of plant types and the significance of wheat rather than barley can be interpreted as signifiers of increasing urban development and social complexity. Clearly, however, we need to have a much larger assemblage from Charsadda, and one tied directly to relevant contexts from the most intensive urban phase before we can make further assertions.

15.7 CHARSADDA AND THE SWAT SITES: A COMPARISON OF PLANT MATERIAL

In terms of location and period, the excavated sites in Swat (and to a lesser extent Dir), to the north of the Vale of Peshawar are likely to have been important contacts for occupants of Charsadda and district, and so a brief consideration of the plant assemblages from these sites is useful. Given the radiometric dates of the Bala Hisar, it is now clear that there is considerable occupation overlap between the incipient urban development at Charsadda, and the period of population expansion in Swat, dubbed Period IV by Stacul, in his Swat chronology (Stacul 1987; 1994a; 1994b; 1996; Young 2003: 83). Although there is little uniformity in the way that the plant material from the sites of Aligrama, Bir-kot-ghundai, Ghaligai and Loebanr III (Costantini 1987: 1979) has been collected or analysed, we are again able to look at presence and absence of plant types, and gross changes in these types over time, and observe some major trends. Firstly, there is a far greater range of plants recovered and identified from these sites, as shown in Table 15.3, and this includes not only four different cereals, but also wild plants in the form of hackberry, and possibly grape.

Costantini (1987: 155) notes that at Ghaligai a 'large quantity of barley straw' was recovered from a hearth dated to PIII (c. 1900–1700 BC), which may have interesting implications in terms of cereal production for human or animal use, given that barley has softer straw than wheat. At both Aligrama and Loebanr III a wide range of plant types were recovered, including three types of cereal, legumes and fruit. Bir-kot-ghundai provides interesting contrast, being the only Swat site where only cereals were recovered, and the only site from which oats were noted. The sites all show a mix of both summer and winter crops, which may well be the result of very fertile conditions in Swat, suited to cereal cultivation and rice production in particular. Interestingly, Bir-kot-ghundai is the one site in Swat which approaches urban or incipient urban status (Callieri 1992: 343–345), and in terms of having only domesticated plant remains and a very narrow overall range of plant types, can be seen as similar to Charsadda. There are also many differences between each of the Swat sites themselves, however, as well as differences with the Charsadda archaeobotanical material, and because of this it is rather difficult to make any further comparisons. This situation is compounded by the small sample size from each site as well as the individual sampling strategies, which tend to be reactive rather than tied to research questions (Costantini 1987: 155).

15.8 UNCHARRED PLANT MATERIAL

As noted above, two botanical artefacts were recovered at the Bala Hisar which were not charred macro-remains. They are one piece of mudbrick with a leaf imprint from context 1 (Wheeler's backfill) and a piece of mudbrick with an impression of bamboo type plant from context 11 (the fill of robber pit 9). Unfortunately as these are both disturbed contexts, the finds are of little value in terms of understanding more about plant use, particularly in relation to building materials at Charsadda. They are noted here

primarily because they are seen as important indicators of the need for archaeologists to recognise that information about plant use can be preserved in a number of ways, not simply by burning. Additional forms of indirect evidence, a 'single-holed sickle', mortars and pestles, are included in Sections 11.5, 11.11 & 11.12.

15.9 CONCLUSION

The archaeobotanical assemblage from the Bala Hisar of Charsadda is small, yet it has provided us with a great deal of information and ideas about plant use at the site. The identification and analysis of the seeds shows a very narrow range of types present here, and all the food plants are from domesticates. When the assemblage is compared to assemblages from urban Harappan sites and rural sites (and one incipient urban site) in Swat, it is possible to begin to suggest interpretations of the material which link into the nature of the site. The narrow range of plant types and the absence of barley may well echo the integrated Harappan situation, where increasing social complexity and specialised site functions show a greater separation between agricultural production and consumption, and likewise, a separation between cereals for humans and cereals for animals. When we compare the Charsadda material with that from the Swat sites, there are some very clear differences, such as the far greater plant range from the latter, their mix of wild and domesticated food plants and their greater mix of winter and summer plants. The latter point could be one of great interest in terms of rice production and possible trade, although at the moment this must remain speculative. Rice can be grown without irrigation or a paddy system, but it flourishes when there is a good irrigation system and the plentiful natural water supply in Swat (the river, regular rainfall and snow melt) along with fertile soils make this a good area for paddy. Also, rice is a summer crop while wheat and barley are winter crops. The presence of both suggests an intensification of agriculture, and the increasing range of plant types that would have been used as food crops supports this. We have some evidence for rice in the early phases at Charsadda, a small amount of uncharred husk, with increasing amounts from later periods. Perhaps the rice we have at Charsadda has been imported from Swat? This raises many interesting ideas about contact and trade (see Young 2003), but until we have many more samples tied closely to dated occupation layers, this must remain an exploratory suggestion. Similarly, the wood charcoal that has been recovered and identified points towards interesting ideas of environment exploitation and wood selection, as well movement, contact or trade. While three of the wood types identified are local to the Charsadda area, mulberry and deodar have been introduced to the site from either areas to the north or south in the case of mulberry, and from the north in the case of deodar. Given that we have evidence for a strong similarity in pottery types between the Swat sites and Charsadda (see Chapter 8), the presence of deodar at Charsadda and also rice, which may well have been grown in Swat, there is potential for making a case of great contact between the occupants of the Swat valley and the Vale of Peshawar during the Early Historic period and before.

	Context										
	1065	1031	1032	1043	1052	1073	1063	1003	1012	1017	1095
Triticum spp. L. (wheat)	4	3		3	2	1					
Lens culinaris L. (lentil)		1	5		2		2				
Oryza cf. *sativa* L. (rice)			4					10g*	4.3g*	2g*	
Chenopodium spp. L (fat hen/goosefoot)		2	2								
Rumex spp. L. (dock)		1				1					
Galium spp. L. (bedstraw)			1								
Wood charcoal											
Acacia spp. (acacia)	X					x					x
Dalbergia sissoo (shisham)	X										x
Morus spp. (mulberry)						?					
Olea spp. (olive)	X										x
Cedrus deodara (deodar)	X										

*Table 15. 1: Charsadda plant remains: charred (*husk and grain charred together)*

Trench	Context	Phase	Description
VIII	1003	V	Fill of robber pit
VIII	1012	V	Fill of robber pit
VIII	1017	V	Fill of robber pit
IX	1095	V	Fill of robber pit
VIII	1031	II	Old land surface / levelling
VIII	1032	II	Charcoal lens / wall melt
VIII	1043	II	Fill of pit 1042
VIII	1052	II	Old land surface / levelling
VIII	1063	II	Old land surface / levelling
VIII	1065	II	Burnt lens
VIII	1073	II	Fill of pit 1065

Table 15.2: Charsadda plant remains: context concordance

	Cropping season	Aligrama	Bir-kot-ghundai	Ghaligai	Loebanr III
Triticum spp.					
Wheat	W	Y	Y	Y	Y
Hordeum spp.					
Barley	W	Y	Y	Y	Y
Oryza sativa					
Rice	S	Y	Y		Y
Avena spp.					
Oat	W		Y		
Lens culinaris					
Lentil	W	Y			Y
Pisum aarvense					
Pea	W	Y			Y
Phaseolus sp.					
Bean	S	Y			
Linum usitatissimum					
Linseed	W				Y
Celtis australis					
Hackberry	S?	Y		Y	
Vitis vinifera					
Grape	S				Y

S: summer sowing and autumn harvest (kharif crop); W: winter sowing and spring harvest (rabi crop)

Table 15.3: Swat sites: summary of plant remains (source: Costantini 1987; 1979)

CHAPTER 16

THE ARCHAEOZOOLOGICAL REMAINS

Ruth Young

16.1 INTRODUCTION

The study of archaeological animal remains is a direct means of learning about the deliberate and unconscious selection processes taken by past site occupants in relation to exploitation of live animals. This exploitation might include hunting wild animals, the husbandry of domesticates, the role of animals within ideology, or as cultural wealth. Bones and teeth of larger animals are often visible during excavation itself, unlike many plant remains, and this means that they can be easily collected. This visibility does mean that animal remains have been recovered and studied from more sites than plant remains in South Asia; however, one danger with animal bones is that being easily recognised as everyday artefacts, and often resembling modern waste, they can easily be discarded during excavation. Larger animals tend to tell us more about human-animal relationships than about past environmental conditions; for this we need to turn to small mammals, reptiles and so forth, and by their very nature, these small bones are easily lost or discarded during excavation. In fact, without a rigorous soil sieving programme it is unlikely that a significant quantity of small animal bones will be recovered. Learning about diet, human interactions with animals and human choices with regard to animals are important issues within any archaeological project, and it is essential that environmental archaeologists working in South Asia continue to demonstrate this, even when required to work with limited assemblages.

16.2 METHODOLOGY

Faunal material was collected by hand during excavation at the Bala Hisar of Charsadda, and also when material was retained on the 4mm sieve used to screen all excavated deposit. Bones and teeth dominate the assemblage, although a number of related small finds were also recovered, and these are discussed below in Section 16.6. The majority of the bone was in poor condition, being very fragmented and often crumbly, but a small proportion of the assemblage was either complete or retained sufficient diagnostic features for identification. All the identified tooth and bone material are recorded in Tables 16.1 and 16.2, while Table 16.3 presents the material that has been assigned to element, such as rib, long bone and so forth, but has not been identified to genus or species. Identification was made using a combination of modern reference material held by the Department of Zoology, University of Peshawar, and published literature such as Hillson (1992), Davis (1987), and Higham (1975), which was particularly useful for distinguishing between buffalo and cattle. Butchery marks and burning were recorded, and although noted on only a very small proportion of bones, this is discussed further below. Age estimation for the bones was based on epiphyseal fusion of post-cranial elements using Silver's (1969) scheme. Teeth were examined and eruption and wear recorded according to Payne's (1973) scheme. Given the size of the assemblage, c. 300 bones and 125 teeth identified to genus or species from *all* contexts, the nature of the project research questions, and the period under investigation, bone measurements were not taken and distinguishing between sheep and goat was not attempted. As noted in Chapter 15 with regard to analysis of the archaeobotanical assemblage, attempting complex quantitative analyses for numerically small assemblages is not a useful approach, therefore the main analytical approaches for the bone assemblage have been the calculation of the Number of Identified Specimens (NISP) and estimation of the Minimum Number of Individuals (MNI) recovered. The NISP is the number of individual bones and bone fragments from any given sample identified to genus or species (Davis 1987: 35–36) and is useful when comparing material from excavations carried out at different times and with different sampling conditions, as it allows a direct comparison. The MNI calculation is based on the minimum number of individuals of each genus or species represented within a context, period and so forth, and is useful in determining relative numbers in an assemblage, and changes over time in the composition of an assemblage (Davis 1987: 36; Hesse & Wapnish 1985: 113). Because of the small numbers of bones that have been identified overall, only the MNI calculations for the three main types in the assemblage (cattle, buffalo and sheep/goat) have been given for contexts representing in-situ archaeology only. See also O'Connor (2000) for a discussion of the strengths and weaknesses of these analytical techniques.

16.3 THE ANIMAL BONES

Tables 16.1, 16.2 and 16.3 list all the bone and tooth material which has been either identified to both genus or species and element (NISP), or to element only. Figures 16.1, 16.2 and 16.3 provide graphic summaries of the bone data, and highlight the main trends in the NISP analysis.

Figures 16.1 and 16.2 summarise the bone material from *all* excavated contexts and periods, while Figure 16.3

presents only identified bone from contexts that represent in-situ archaeology.

As Figure 16.1 clearly shows, the majority of identified animal bones were recovered from Period V, followed by Periods II and VI, with only a total of two identified animal bones from Period III. This trend is echoed in the animal bones which have been assigned to element, but have not been identified to genus or species. Figure 16.2 shows the unidentified animal bone by weight for each Period, and this shows a similar trend to Figure 16.1, except that whereas there are more identified bones in Period II than VI, there are more unidentified bones in Period VI than II. Period V has the most identified and unidentified bones, and Period III the least number. This under-representation of archaeozoological remains in Period III is linked to the fact that the Period was only encountered in limited contexts, such as ditch cut 55, rather than in residential levels; it is very possible that redeposited material from Period III is present within the robber pits of Period V.

In terms of NISP, cattle clearly dominate in Periods II and V, and although they remain significant in Period VI, sheep/goat exceed them in numbers in this period. The greatest range of identified types are in Period V, which, as noted above, is also the Period with the greatest number of animal bones in total. Cattle and sheep/goat dominate the whole assemblage, with buffalo the third most important animal in terms of NISP, for Periods II and V, although, surprisingly, in Period VI there are more dog than buffalo bones. In order to further understand these apparent trends, it is also necessary to consider the calculations of MNI for the three main animal types: cattle, buffalo and sheep/goat. Figure 16.4 is based on identified bones from contexts representing in-situ archaeology.

There is a general agreement between the NISP calculations and the MNI calculations, with cattle again dominating the assemblage in both Periods II and V. Sheep/goat dominate in both the NISP and MNI calculations for Period VI, and it is only in the buffalo and sheep/goat calculations for Period II that there is any difference; here, sheep/goat have the greater number of identified bones, but buffalo have the greater number of individuals. The main trends that can be seen throughout these calculations are the importance of cattle and the striking importance of buffalo, and the relative unimportance of sheep/goat.

A small proportion of both the identified and unidentified animal bones from the Bala Hisar showed signs of charring, and/or had cut or chop marks. In terms of burnt bones, both identified and unidentified material was recovered from context 71 (wall melt), identified material from context 60 (fill of pit/ditch 61), and unidentified material from contexts 72 (fill of ditch 65) and 7 (old land surface). Identified bone which showed signs of butchery in the form of cut or chop marks was recovered from contexts 57 (fill of pit/ditch 61) and 1077 (old land surface), and unidentified bone from contexts 72 (fill of ditch 55) and 7 (old land surface). Contexts 57, 60, 71 and 1077 have been assigned to Period II, while context 72 has been assigned to Period III and context 7 to Period VI, which shows that this material is not concentrated in any one context or Period. While very little identified bone has been recovered from context 72 (the only context with bone from Period III), both burnt and cut unidentified bone has been recovered. This suggests that ditch 65 may well have been used for the dumping of waste, and that the lack of identifiable bone may be the result of butchery or table practices breaking up the bone, in addition to other taphonomic effects.

Evidence for ageing through unfused bones is also rather scarce: one unfused unidentified bone was recorded from the fill of a robber pit, and of the fourteen unfused specimens noted in the identified bone assemblage, only four examples are from secure contexts. Two of these, a young cattle bone and a young sheep/goat bone are from context 71 (wall melt); and a further two young cattle bones are from context 57 (fill of ditch/pit 61) and 1076 (old land surface). This bone fusion data, based on Silver (1969), shows that the age of death for the vast majority of animals at Charsadda is adult. It is very difficult to draw conclusions from such a small data set, but it can be noted that the absence of young buffalo bones is consistent with their use for traction, milk and other dairy products, rather than primarily for meat. The bone fusion data will be compared with the tooth wear data discussed below.

16.4 ANIMAL TEETH

While a number of animal teeth were recovered from the trenches at Charsadda, the disturbed nature of much of the archaeology means that only those from five contexts can be considered here. In total there are fourteen identified teeth from in-situ contexts, and these are shown in Table 16.4, which shows species and age estimation in addition to context and period information.

The age estimations based on tooth wear (Hillson 1992; Payne 1973) show that this assemblage comprises mainly adults, with very few young or elderly individuals. Again, this is a very small data set from which to work, but the tooth wear results are comparable with those from the bone fusion analysis, and show that the vast majority of bones and teeth in this assemblage are from animals who were mature at the time of death.

16.5 URBAN CHARSADDA AND URBAN HARAPPA: A COMPARISON OF ANIMAL MATERIAL

As noted in Chapter 15, there is very little in the way of urban environmental data from the Early Historic period in this region that we use as a comparison with the Bala Hisar material. Archaeozoological analysis from Harappan sites, however, has provided useful insights that we can pursue here. Meadow (1991: 89) has noted that there are in fact many differences between Harappan urban sites in terms of their animal bone assemblages and approaches to subsistence. He points out that while the same types of domesticates occur on the majority of sites, the ratios of wild animals to domesticates change, as do the ratios of different domestic animals. One very important study by Patel (1997) discusses the significance of buffalo and their requirements, which in turn suggests that extensive exploitation of buffalo requires a largely seden-

tary lifestyle as buffalo require year round access to slow or standing water and mud, and good quality fodder. Therefore, buffalo are unlikely to be the animal of choice for mobile pastoral groups, although in recent years, as the use of trucks to transport selected animals long distances has become more common, some transhumant pastoral groups in Swat and Dir are keeping one or two buffalo (Young 2003).

16.6 CHARSADDA AND THE SWAT SITES: A COMPARISON OF ANIMAL MATERIAL

Section 15.5 shows why the sites of Aligrama, Bir-kot-ghundai, Ghaligai and Loebanr III can be useful in terms of discussion of the Charsadda archaeobotanical material, and the further sites of Kalako-deray (Swat) and Timargarha and Balambat (Dir) can be added when we look at the archaeological animal bone assemblage. Table 16.5 provides a summary of the identified animal bones from the Swat and Dir sites, and shows some immediate differences between these, and the material from Charsadda.

There is a much greater range of both domesticated and wild animals identified from these sites when compared to Charsadda, although there are many differences between each of the sites in terms of the identified animals (and Weber noted a similar circumstance with regard to Harappan sites). Bir-kot-ghundai (potentially an incipient urban site) is the only one of these six sites from which only domesticated animals were identified; even from Charsadda we have a small number of deer bones, and pig which could be either domesticated or wild. Buffalo were noted from Aligrama only, which is interesting n light of the sedentary requirements of these animals. Five bones from PV (c. 800–500 BC) were identified as buffalo, and they are likely to represent no more than one animal.

Analysis of tooth wear to give age at death estimates on the Bir-kot-ghundai and the Loebanr III assemblages have shown great contrast. At Bir-kot-ghundai, sheep, goat and pig were all slaughtered at a much younger age (juvenile) than at Loebanr III (adults), and Compagnoni, who carried out the analyses at both sites claims that this 'would imply, although one must proceed with caution in making such conclusions, that the inhabitants at Bir-kot-ghwandai... had more refined eating habits than their fellow men at Loebanr 3' (1987: 141). The Charsadda age at death data from both bone fusion and tooth wear suggests that like the occupants of Loebanr III, they were consuming older animals, and this is very interesting in terms of consumption differences in urban or proto-urban sites and rural ones. Given that both Bir-kot-ghundai and Charsadda are developing urban sites (although only Charsadda goes on to become a major urban site) we could expect greater similarities between them than any of the other sites, yet this clearly is not the case. There is no simple urban– rural pattern or set of markers in subsistence material, although we can begin to see some distinct trends.

The animal bone assemblage from Kalako-deray shows that both wild and domestic animals were present, although cattle and sheep/goat dominate the assemblage, and of these two animals, cattle account for nearly half the identified bones, while sheep/goat account for just over one third. MNI calculations suggest that the cattle bones come from five specimens and the sheep/goat from nine, and the faunal analyst here, Jawad (1998: 271) argues that cattle were the most important animal in terms of meat contribution. Clearly cattle were significant at Kalako-deray, and this is supported by the presence of clay zebu figurines, recovered from beneath a floor level in the bottom of a pit (Stacul 1995: 124). Stacul has suggested that such depositions are of ritual significance, and this idea is paralleled by interpretations of cattle in the integrated Harappan state system as indicators of wealth and even ritual (Shaffer & Lichtenstein 1995). Terracotta zebu have been recovered from Charsadda also, and alongside the bone assemblage itself, may indicate that cattle are animals of great importance in this region during the latter half of the second and the first millennia BCE. They dominate the overall faunal assemblage at Charsadda, as well as Kalako-deray, Aligrama, Ghaligai, Loebanr III and Bir-kot-ghundai, and although with all these sites there are sampling and deposition issues that need to be considered, this is surely a real and important trend.

16.7 ADDITIONAL ANIMAL MATERIAL

While animal bone and teeth are an important means of learning directly about animals that are being exploited at Charsadda, there are other less direct sources of information that are also important, and perhaps able to shed light on issues not immediately related to diet and economy. The terracotta figurines (see Chapter 12 and Table 12.3) recovered from the Bala Hisar draw on both wild and domestic animals as their subjects, although cattle and horses are the most common animals depicted (thirteen figurines of each). Wheeler also records a number of animal figurines, of which horse and bull or ox are the most common (1962: 111–114), and Marshall also notes a number of animal figurines, of which horses and elephants are common, while 'humped bulls are not as common as might be expected on any of the Taxila sites (Marshall 1951: 457). The recovery of nineteen carts at Charsadda alongside the presence of two common animals used for haulage and traction could suggest that movement of people and goods plays a major part in the landscape in this region. It has been suggested that the purpose of terracotta figurines may be toys (Marshall 1951: 452), ornamental, or ritual items (Stacul 1995), but they may be also symbolise the importance of agriculture in an increasingly urban and socially complex area. Ethnographic interview in Charsadda District today has shown that the sedentary farmers here keep only one or two buffalo or cows for milk and traction, while sheep, goats and other animals are the preserve of seasonal pastoral groups, frequently spending winter in the Vale of Peshawar away from Swat and Dir (Young 2003). This emphasis on cattle and buffalo within what is now an urban hinterland is perhaps a direct echo of what we see in the animal bone and terracotta assemblages from the Early Historic period.

It is interesting that both the major excavations here have recovered horse terracotta figurines while no horse and donkey bones were identified within the animal bone

assemblage. Further, horse or donkey bones were noted from all the Swat and Dir sites. This may be a product of differential deposition; the presence of cut marks and charring on a small proportion of the bones recovered from a range of contexts at Charsadda suggests that they are likely to be from food waste. While buffalo and cattle may have been kept primarily for traction and dairy products, they may well have been slaughtered for meat once past their prime, thus entering the archaeological record with the bones of other meat meals such as sheep/goat, deer and pig. Horses and donkeys may not have been considered suitable for consumption, and thus disposed of elsewhere, although this is recognised as largely conjecture at this stage. Ivory, bone or shell beads or bangles (see Chapter 14 and Table 14.1) have also been recovered from all Periods at Charsadda. Wheeler noted a single shell bangle from a context that he attributed to the 2nd to 4th century AD (1962: 121), and although he lists the terracotta and stone beads from his excavations, he does not record any shell, ivory or bone beads. The notable absence of partially finished materials at the Bala Hisar of Charsadda, unlike the evidence at the Bhir Mound (Marshall 1951: 92), suggest that these materials were not made in the vicinity of the excavated trenches but may have been imported ready made.

16.8 CONCLUSION

The analysis of the animal bone and teeth assemblage from the Bala Hisar of Charsadda has revealed a number of trends that can help us build a picture of animal exploitation here. Firstly, we see a relatively small range of animals, which is similar to the findings of the archaeobotanical analysis, and may well be a function of the sites increasing urban nature whereby both pastoralism and agriculture take place further away as the population increases. Within the range of identified animals there are very few wild types, and while these may have been hunted or trapped, the emphasis is clearly on domesticates from the very early levels of the site. Within the domesticated species identified, cattle, buffalo and sheep/goat dominate the assemblage through every Period, and with little change in their relative proportions, except in Period VI (and Period III which has only one identified bone). Cattle are clearly the most numerous animals in terms of bone numbers and the estimated number of animals in Periods II and V, while sheep/goat are significant in both estimates in Period VI. Buffalo are also clearly very important in terms of the animal assemblage at Charsadda, and their presence, along with cattle, can be interpreted as showing that this is an urban, or proto-urban site in its early stages, where intensive agriculture is practiced taking advantage of potentially fertile soils and ploughing to produce wheat crops for human consumption. The age at death data that we have for Charsadda supports this, showing that the vast majority of animals were adult if not old, when they died. Terracotta animal figures and carts also show that traction animals and vehicles played an important role at Charsadda, although in what capacity we are not entirely sure. Buffalo are also considered to be a marker of sedentary, if not urban lifestyles (Patel 1997), and this supports the interpretation of animals here being of primary importance for their contribution to agriculture and for other non-meat products. When we compare the animal assemblage from Charsadda with those from urban Harappan sites, it is clear that there is a great deal of variation between each, and this means that any evident trends are harder to understand and interpret than for the plant material. Similarly, when we look at the animal bones from the Swat and Dir sites, it is clear that there is no single pattern or model that can be presented to explain the different ratios of wild to domestic animals, or of different domestic animals to each other. Rather, within the Charsadda assemblage we can see indications of an urban, sedentary lifestyle, where agriculture and pastoralism are elements of increasing complexity.

Trench	Context	Period	Species	Element	Side	Weight	Comments
VI	57	II	Bos sp.	metatarsal - prox artic	l	5.8	unfused
VI	57	II	Bos sp.	femur - distal frag	l	27.1	
VI	57	II	Bos sp.		r	12.9	
VI	57	II	Bos sp.	mandible	l	62	
VI	57	II	Bos sp.	vert - neural spine		9	
VI	57	II	Bos sp.	mandible	r	31.6	
VI	57	II	Bos sp.	mandible	r	13.2	
VI	57	II	B. bubalus?	metatarsal - shaft	l	25.4	
VI	57	II	Ovis / Capra	metatarsal - shaft	r	6.2	
VI	57	II	Ovis / Capra	metapodial - distal artic	r	7.8	cut
VI	57	II	Ovis / Capra	tibia - shaft and distal artic	l	8.2	
VI	57	II	Ovis / Capra	calcaneous	l	5.4	
VI	57	II	Ovis / Capra	humerus	l	23.6	
VI	57	II	Ovis / Capra	humerus - distal	r	21.3	
VI	57	II	Ovis / Capra	ulna - prox	r	4.3	
VI	60	II	Bos sp.	humerus - distal	l	101	
VI	60	II	Bos sp.		l	17	burnt
VI	60	II	Bos sp.	humerus - distal	r	100	
VI	60	II	B. bubalus	phalange (2nd)	r	17	
VI	71	II	Bos sp.	rib frag	l	21.4	
VI	71	II	Bos sp.	tibia - shaft and distal artic	l	62.8	
VI	71	II	Bos sp.	phalange (1st)	r	20	
VI	71	II	Bos sp.	vert - lumbar		7.4	
VI	71	II	Bos sp.	metatarsal - distal artic frag	r	7.6	
VI	71	II	Bos sp.	scapula fragment		21	
VI	71	II	Bos sp.	thoracic vert - neural spine		12.6	
VI	71	II	Bos sp.	rib frag with proximal artic	r	21.4	

Table 16.1: Charsadda animal bones by context

Trench	Context	Period	Species	Element	Side	Weight	Comments
VI	71	II	Bos sp.	tibia shaft and distal artic	l	62.8	unfused
VI	71	II	Bos sp.	1st phalange	r	20	
VI	71	II	Bos sp.	lumbar vertebra		7.4	
VI	71	II	Bos sp.	metatarsal distal artic frag	r	7.6	
VI	71	II	Bos sp.	scapula		21	
VI	71	II	Bos sp.	metatarsal distal frag	r	28.9	
VI	71	II	Bos sp.	scapula frag, glenoid cavity	r	38.8	
VI	71	II	Bos sp.	thoracic vertebra frag		12.6	
VI	71	II	B Bubalus?	humerus - distal	r	101	
VI	71	II	B Bubalus?	calcaneous	l	72.2	
VI	71	II	B Bubalus?	metacarpal - proximal frag	l	31.2	
VI	71	II	B Bubalus?	metatarsal - distal artic frag	r	28.9	
VI	71	II	B Bubalus?	astragalus	r	42.2	
VI	71	II	B Bubalus?	phalange (1st)	r	15.2	
VI	71	II	B Bubalus?	scapula fragment		38.8	
VI	71	II	B. bubalus	distal humerus artic	l	101	
VI	71	II	B. bubalus	calcaneous	l	72.2	
VI	71	II	B. bubalus	metacarpal proximal frag	r	31.2	
VI	71	II	B. bubalus	astragalus	l	42.2	
VI	71	II	B. bubalus	phalange(1st)	r	15.2	
VI	71	II	Cervus sp.	metatsal - shaft - prox artic		18	
VI	71	II	Ovis / Capra	phalange (2nd)	r	0.9	Unfused
VI	71	II	Ovis / Capra	metacarpal - distal artic	r	2.4	
VI	71	II	Ovis / Capra	caudal vert		7.4	Burnt
VI	71	II	Ovis / Capra	ulna frag	r	7.1	Burnt
VI	71	II	Ovis / Capra	metatarsal frag	l	14.2	
VI	71	II	Ovis / Capra	cervical vertebra frag		6	
VI	71	II	Ovis / Capra	phalange (2nd)	l	0.9	Unfused
VI	71	II	Ovis / Capra	metacarpal - dist artic	l	2.4	
VI	71	II	Ovis / Capra	caudal vertebra		7.4	
VI	71	II	Ovis / Capra	ulna frag		7.1	
VI	71	II	Ovis / Capra	metatarsal frag	r	14.2	
VI	71	II	Ovis / Capra	cervical vertebra frag		6	
VI	71	II	Sus sp.	calcaneous		53.6	
VI	71	II	Sus sp.	proximal calcaneous frag		53.6	
VI	72	III	Ovis-capra	tibia, distal frag	l	8.5	
IX	1041	II	B bubalus	femur head	l	52.4	
VIII	1052	II	B bubalus	axis frag		25	
VIII	1071	II	Cervus sp.	metacarpal - distal artic		8.3	
VIII	1076	II	Bos sp.	metatarsal - prox artic	r	5.8	Unfused
VIII	1076	II	Bos sp.	femur - distal frag	r	27.1	
VIII	1076	II	Bos sp.	2nd phalange	l	12.9	
VIII	1076	II	Bos sp.	mandible frag	r	62	
VIII	1076	II	Bos sp.	vertebra, neural spine		9	
VIII	1076	II	Bos sp.	mandible frag	r	31.6	
VIII	1076	II	Bos sp.	mandible frag		13.2	
VIII	1076	II	B. bubalus	scapula, glenoid cavity frag	l	45.5	
VIII	1076	II	B. bubalus?	metatarsal - prox frag	r	25.4	
VIII	1076	II	Ovis / Capra	metatarsal - shaft - artic frag	r	6.2	
VIII	1076	II	Ovis / Capra	metapodial - distal artic	l	7.8	
VIII	1076	II	Ovis / Capra	tibia shaft and distal artic	l	8.2	
VIII	1076	II	Ovis / Capra	calcaneous	l	5.4	
VIII	1076	II	Ovis / Capra	humerus	l	23.6	
VIII	1076	II	Ovis / Capra	humerus - distal frag	l	21.3	
VIII	1076	II	Ovis / Capra	ulna - prox frag	r	4.3	
VIII	1077	II	Bos sp.	trochanter frag	r	32.2	
VIII	1077	II	Bos sp.	metapodial - distal frag	l	13.1	Cut
VIII	1077	II	Bos sp.	caudal vert		10	
VIII	1077	II	Bos sp.	caudal vertebrae		10	
VIII	1077	II	Ovis / Capra	phalange (3rd)	r	3.5	
VIII	1077	II	Bos sp.	trochanter frag	l	32.2	
VI	41	V	Bos sp.	carpal/tarsal		16.5	
VI	41	V	Bos sp.	metacarpal - distal artic	l	18.1	
VI	41	V	Cervus sp.	carpal/tarsal		4.6	
VI	41	V	Ovis / Capra	caudal vert		2.7	
VI	41	V	Ovis / Capra	carpal/tarsal		3.1	
VI	42	V	Bos sp.	phalange (1st)	l	20.7	
VI	42	V	B bubalus	carpal/tarsal		17.8	
VI	42	V	B bubalus	carpal/tarsal		21.3	
VI	45	V	B bubalus	vert frags		22.2	
VI	45	V	Ovis / Capra	humerus - distal	r	19.3	
VI	45	V	Ovis / Capra	cranial frag		8.6	
VI	45	V	Sus sp.	calcaneous frag		21.5	
VI	46	V	Canid sp.	ulna - distal frag		6.1	
VI	58	V	Bos sp.	thoracic vert		22.2	
VI	58	V	Bos sp.	rib frag	r	9.4	burnt
VI	58	V	Bos sp.	carpal/tarsal		8.2	
VI	58	V	B bubalus	tibia - distal frag	r	23.6	
VI	58	V	B bubalus	carpal/tarsal		25.3	
VI	58	V	Ovis / Capra	tibia - distal	r	7.8	
VI	58	V	Ovis / Capra	phalange (2nd)	r	7.8	sliced
VI	64	V	B bubalus	phalange (2nd)	l	31	
VI	64	V	B bubalus	ulna – proximal frag	r	46	

Table 16.1(cont.): Charsadda animal bones by context

Trench	Context	Period	Species	Element	Side	Weight	Comments
VI	64	V	B bubalus	astragalus frag	r	47.4	
VIII	1001	V	Bos sp.	femur head	r	29.5	
VIII	1001	V	Bos sp.	pelvic frags		25.1	
VIII	1001	V	Gallus sp.	humerus -proximal		7.2	
VIII	1001	V	Ovis / Capra	metapodial - distal frag	l	10.2	
VIII	1001	V	Ovis / Capra	caudal vert		5.8	
VIII	1001	V	Ovis / Capra	astragalus frag	l	2.9	
VIII	1001	V	Ovis / Capra	phalange (1st)	l	2.6	
VIII	1001	V	Ovis / Capra	phalange (2nd)	l	4.4	
VIII	1001	V	Ovis / Capra	caudal vert		1.9	
VIII	1001	V	Sus sp.	metapodial frag		9.9	Unfused
VIII	1001	V	Sus sp.	scapula fragment		4.9	
VIII	1003	V	Bos sp.	Femur	r	19.4	Unfused
VIII	1003	V	Bos sp.	metapodial - prox frag	r	13	
VIII	1003	V	Bos sp.	phalange (2nd)	r	12.1	
VIII	1003	V	Bos sp.	phalange (2nd)	l	9.8	Burnt
VIII	1003	V	Bos sp.	Astragalus	r	21	
VIII	1003	V	Bos sp.	phalange (2nd)	r	13.6	
VIII	1003	V	Bos sp.	metapodial - distal frag	l	6.4	
VIII	1003	V	Bos sp.	metapodial - distal frag	r	8.5	
VIII	1003	V	Bos sp.	carpal/tarsal		20.1	
VIII	1003	V	B bubalus	carpal/tarsal		12.3	
VIII	1003	V	B bubalus	metapodial - distal frag	r	35.2	Burnt
VIII	1003	V	B bubalus	scapula fragment		17.3	
VIII	1003	V	Canid sp.	ulna shaft		4.3	
VIII	1003	V	Cervus sp.	Metatarsal		19.8	Cut?
VIII	1003	V	Ovis / Capra	scapula fragment		4.3	Burnt
VIII	1003	V	Ovis / Capra	phalange (1st)	r	2.8	
VIII	1003	V	Sus sp.	thoracic vert		8.5	
VIII	1003	V	Sus sp.	phalange (1st)		19.8	
VIII	1006	V	Bos sp.	maxilla frag		26.9	
VIII	1006	V	Bos sp.	phalange (2nd)	r	17	
VIII	1006	V	Bos sp.	phalange (2nd)	l	12	
VIII	1006	V	Bos sp.	phalange (2nd)	r	11.7	
VIII	1006	V	B bubalus	ulna-radius - prox	r	34.8	
VIII	1006	V	Canid sp.	rib – distal		7	Burnt & cut
VIII	1006	V	Canid sp.	caudal vert		4.4	
VIII	1006	V	Ovis / Capra	rib – distal	r	7.3	Burnt
VIII	1006	V	Ovis / Capra	phalange (1st)	r	2.1	
VIII	1006	V	Sus sp.	metapodial - prox frag		19.5	
VIII	1006	V	Sus sp.	caudal vert		8.8	
VIII	1006	V	Sus sp.	carpal/tarsal		6	
VIII	1006	V	Sus sp.	carpal/tarsal		5.5	
VIII	1010	V	Bos sp.	femur – prox and shaft	l	27.7	Chopped
VIII	1010	V	Bos sp.	phalange	l	17.2	
VIII	1010	V	Bos sp.	femur- proximal	r	8.5	
VIII	1010	V	Bos sp.	carpal/tarsal		7.2	
VIII	1010	V	Bos sp.	carpal/tarsal		8	
VIII	1010	V	B bubalus	astragalus	l	120	
VIII	1010	V	Canid sp.	femur - proximal and shaft		1.2	
VIII	1010	V	Ovis / Capra	lumber vert		0.8	
VIII	1010	V	Sus sp.	calcaneous		37.5	
VIII	1012	V	Bos sp.	metapodial - distal frag	l	15.9	
VIII	1012	V	Bos sp.	humerus - distal	l	63.4	
VIII	1012	V	Bos sp.	phalange (3rd)	r	8.2	
VIII	1012	V	Bos sp.	phalange (2nd)	l	19.7	
VIII	1012	V	B bubalus	phalange (3rd)	l	18.6	
VIII	1012	V	Gallus sp.	humerus		1.4	
VIII	1012	V	Ovis / Capra	carpal/tarsal		2	
VIII	1012	V	Sus sp.	phalange (3rd)		11.8	
VIII	1014	V	Bos sp.	astragalus	l	30.6	
VIII	1014	V	B bubalus	carpal/tarsal		21.6	
VIII	1014	V	B bubalus	carpal/tarsal		17.2	
VIII	1014	V	Cervus sp.	Metacopodial - distal frag		9	
VIII	1014	V	Felis sp. sp.	Phalange		1.8	
VIII	1014	V	Ovis / Capra	femur – prox and shaft		4.1	
VIII	1018	V	Bos sp.	vert frags		38.6	
VIII	1018	V	Bos sp.	calcaneous frag	l	31.3	
VIII	1018	V	Bos sp.	carpal/tarsal		28	
VIII	1018	V	Bos sp.	carpal/tarsal		15.9	
VIII	1018	V	Bos sp.	carpal/tarsal		11.2	
VIII	1018	V	Bos sp.	carpal/tarsal		5.1	
VIII	1018	V	Bos sp.	Astragalus	r	37.1	
VIII	1018	V	Bos sp.	phalange (2nd)	l	16.7	
VIII	1018	V	Bos sp.	carpal/tarsal		6.4	
VIII	1018	V	B bubalus	femur – prox and shaft	r	74.8	Unfused
VIII	1018	V	B bubalus	Astragalus	r	51.4	
VIII	1018	V	B bubalus	calcaneous frag	r	41.8	
VIII	1018	V	Gallus sp.	Sacrum		1.4	
VIII	1018	V	Ovis / Capra	metapodial shaft	r	8.5	
VIII	1018	V	Ovis / Capra	Astragalus	r	4.4	
VIII	1018	V	Ovis / Capra	humerus - distal	l	7.4	
VIII	1018	V	Ovis / Capra	tibia - distal and shaft	l	10.3	Burnt

Table 16.1(cont.): Charsadda animal bones by context

Trench	Context	Period	Species	Element	Side	Weight	Comments
VIII	1020	V	Bos sp.	calcaneous frag		17.3	
VIII	1020	V	Bos sp.	femur frag	r	33.1	
VIII	1020	V	Bos sp.	scapula fragment		109	
VIII	1020	V	Gallus sp.	long bone		1.1	
VIII	1038	V	Bos sp.	scapula fragment		16.2	
VIII	1038	V	Ovis / Capra	tibia - distal frag	r	3.6	
IX	1048	V	Bos sp.	astragalus	r	36.7	
IX	1048	V	Bos sp.	astragalus	r	14.8	
IX	1048	V	B bubalus	phalange (1st)		29.2	
IX	1048	V	Ovis / Capra	metapodial - distal frag	r	5.7	
IX	1048	V	Ovis / Capra	phalange (1st)	r	3.4	
IX	1048	V	Ovis / Capra	phalange (1st)	l	2.5	
IX	1048	V	Sus sp.	humerus - distal		10.5	
VIII	1053	V	Bos sp.	phalange (3rd)	r	7.8	
VIII	1053	V	Bos sp.	carpal/tarsal		17.9	
IX	1053	V	Bos sp.?	phalange (1st)	r	33.8	
IX	1053	V	Canid sp.	tibia - distal		5	
VIII	1053	V	Ovis / Capra	tibia - distal and shaft	l	4.6	
VIII	1053	V	Ovis / Capra	scapula fragment		4.3	Cut marks
VIII	1053	V	Ovis / Capra	tibia - distal and shaft	r	1.4	Unfused
VIII	1053	V	Ovis / Capra	metapodial distal artic	r	1.5	Unfused
VIII	1053	V	Ovis / Capra	carpal/tarsal		2.5	
VIII	1053	V	Ovis / Capra	vert frags		3.4	
VIII	1053	V	Ovis / Capra	tibia - distal frag	l	2	Burnt
IX	1053	V	Ovis / Capra	humerus - distal	r	7.2	
IX	1058	V	Bos sp	metapodial prox frag	r	19.4	
IX	1058	V	Bos sp.	metapodial artic	l	15.6	Slightly burnt
IX	1058	V	Bos sp.	phalange (1st)	r	15.6	
IX	1058	V	Bos sp.	vert frags		22.8	
IX	1058	V	Bos sp.	Astragalus	r	26.9	
IX	1058	V	Bos sp.	Astragalus	r	24.4	
IX	1058	V	Bos sp.	phalange (3rd)	l	9.1	
IX	1058	V	Bos sp.	femur head	r	39.5	
IX	1058	V	Bos sp.	carpal/tarsal		5.8	
IX	1058	V	Ovis / Capra	maxilla frag		4.7	
IX	1066	V	Bos sp.	Astragalus	r	68.4	
IX	1066	V	B bubalus ?	astragalus frag	r	47.8	
IX	1067	V	Bos sp.	pelvic frags		66.4	
IX	1067	V	Bos sp.	tibia - distal and shaft	l	26.9	
IX	1072	V	Ovis / Capra	caudal vert		2.4	
IX	1079	V	Bos sp.	scapula fragment		16.2	
IX	1079	V	Bos sp.	tibia/fibula	r	101	Fused together
IX	1081	V	B bubalus	calcaneous		105	
III	1	VI	Bos sp.	carpal/tarsal		11.1	
III	1	VI	Bos sp.	carpal/tarsal		11.7	
III	1	VI	Bos sp.	carpal/tarsal		6	
III	1	VI	Bos sp.	lumbar vert		2.4	
III	1	VI	Bos sp.	carpal/tarsal		15.1	
III	1	VI	Bos sp.	carpal/tarsal		9.6	
III	1	VI	Bos sp.	metapodial - distal frag	r	5.2	
III	1	VI	Bos sp.	carpal/tarsal		4.3	
III	1	VI	Bos sp.	phalange (2nd)	l	6.6	
III	1	VI	B bubalus	carpal/tarsal		19.5	
III	1	VI	Canid sp.	humerus - distal		20	
III	1	VI	Canid sp.	pelvic frags		4.8	
III	1	VI	Canid sp.	cranial frag		0.9	
III	1	VI	Canid sp.	vert frags		0.9	
III	1	VI	Canid sp.	cranial frag		1.1	
III	1	VI	Canid sp.	carpal/tarsal		0.8	
III	1	VI	Ovis / Capra	tibia - distal	l	15	
III	1	VI	Ovis / Capra	astragalus	l	4.3	
III	1	VI	Ovis / Capra	carpal/tarsal	l	6.2	
III	1	VI	Ovis / Capra	tibia - distal	r	4.3	Unfused
III	1	VI	Ovis / Capra	thoracic vert - neural spine		1.2	
III	1	VI	Ovis / Capra	thoracic vert - neural spine		1.6	
III	1	VI	Ovis / Capra	Astragalus	r	2.4	Sliced
III	1	VI	Ovis / Capra	Astragalus frag		1.7	Sliced
III	1	VI	Ovis / Capra	caudal vert		1.3	
III	1	VI	Ovis / Capra	phalange (1st)	l	1.7	
III	1	VI	Ovis / Capra	caudal vert		7.8	
III	1	VI	Ovis / Capra	tibia - distal frag	r	7.6	
III	1	VI	Ovis / Capra	carpal/tarsal		2.5	
III	1	VI	Ovis / Capra	phalange frag		1.5	Unfused
III	1	VI	Ovis / Capra	scapula fragment		2.3	
III	1	VI	Ovis / Capra	tibia epiphysis		1.4	Unfused
III	1	VI	Ovis / Capra	tibia epiphysis		0.8	Unfused
III	1	VI	Ovis / Capra	tibia epiphysis	r	0.5	Unfused
III	1	VI	Ovis / Capra	Hyoid		0.5	Charred
III	1	VI	Rattus sp.	Mandible		0.1	
VI	5	VI	Bos sp.	calcaneous frag		14.7	
VI	7	VI	Bos sp.	humerus - distal	l	27	
VI	7	VI	Canid sp.	tibia - shaft and prox artic		16.8	Ulna fused

Table 16.1(cont.): Charsadda animal bones by context

Trench	Context	Period	Species	Element	Side	Weight	Comments
VI	7	VI	Ovis / Capra	metapodial frag	r	2.3	
VI	7	VI	Ovis / Capra	lumbar vert		1.5	
VI	7	VI	Ovis / Capra	Metatarsal		4.4	
VI	7	VI	Ovis / Capra	caudal vert		1.3	
VIII	1000	VI	Bos sp.	carpal/tarsal		6.6	
VIII	1000	VI	Bos sp.	femur - distal frag	r	24.1	
VIII	1000	VI	Bos sp.	pelvic frags		14.7	Cut marks
VIII	1000	VI	B bubalus	Astragalus frag		33.8	
VIII	1000	VI	Camid sp.	Metatarsal		7.2	
VIII	1000	VI	Ovis / Capra	metapodial - distal frag	r	1.7	
VIII	1000	VI	Ovis / Capra	Astragalus	l	10.2	
VIII	1000	VI	Ovis / Capra	Astragalus	r	4.4	
VIII	1035	VI	Bos sp.	femur - prox and shaft	r	33.5	
VIII	1035	VI	Ovis / Capra	carpal/tarsal		2.2	
VIII	1035	VI	Rattus sp	humerus -prox		8.1	

Table 16.1(cont.): Charsadda animal bones by context

Trench	Context	Period	Species	Element	Position	Wear	Weight	Comments
VI	57	II	Bos	M2	Lower	N	13.8	
VI	57	II	Bos	M3	Lower	F	27	
VI	57	II	Bos	P4	Lower	H	5.9	
VI	57	II	Bos	M3	Lower	E	38.2	
VI	57	II	Bos	M3	Lower	G	18.7	
VI	57	II	Bos	M2	Lower	G	21.5	
VI	57	II	Bos	M1	Lower	H	6.3	
VI	57	II	Ovis / Capra	M1	Lower	C	4.1	mand frag
VI	60	II	Ovis / Capra	PM1	Lower		2	mand frag
VI	60	II	Sus	M2	Lower	E	3	
VI	60	II	Sus	C			1	
VIII	1054	II	Bos	P3	Lower	H	2.3	
VI	35	V	Bos	P	Lower		5.6	
VI	41	V	Bos	M1	Lower		17.7	
VI	45	V	Bos	M2	Lower	H	20.7	mand frag
VI	45	V	Ovis / Capra	M2	Lower	G	5.4	
VI	45	V	Ovis / Capra	P2	Upper	I	1	
VI	45	V	Ovis / Capra	M3	Lower	G	7.6	
VI	58	V	Felix	C			0.5	
VI	58	V	Ovis / Capra	I			0.5	
VI	58	V	Ovis / Capra	M1	Lower	B	1.5	
VI	58	V	Rattus	C			0.1	
VIII	1001	V	Bos	M1	Lower	C	33.7	
VIII	1001	V	Bos	M1	Lower	F	19	
VIII	1001	V	Cervid?	M	?	?	6.3	
VIII	1001	V	Cervid?	PM	?	D	13.8	
VIII	1003	V	Bos	M1	Upper	E	16.2	mineralised
VIII	1003	V	Cervid	P4	?	F/G	2.3	
VIII	1003	V	Cervid	M2	Lower	E	5.7	
VIII	1003	V	Cervid	M2	Lower	E	5.5	
VIII	1003	V	Ovis / Capra	M3	Lower	E	8.6	
VIII	1003	V	Ovis / Capra	M1	Lower	D	2.2	
VIII	1003	V	Ovis / Capra	M3	Lower	E	6.5	
VIII	1006	V	Bos	M	?	?	6	
VIII	1006	V	Bos	P3	Upper	E	12.3	
VIII	1006	V	Bos	M1	Upper	D	12.9	
VIII	1006	V	Bubalus?	M3	Lower	D	35.3	
VIII	1006	V	Bubalus?	M1,2	?	?	30.7	
VIII	1006	V	Cervid	M3	Lower	D	14.1	
VIII	1006	V	Ovis / Capra	M2	Lower	D	7.1	
VIII	1006	V	Ovis / Capra	M1/2	?	C	4.4	
VIII	1010	V	Cervid	M1	Lower	E	6.3	
VIII	1010	V	Cervid	M1	Upper	E	10.1	
VIII	1010	V	Cervid	M3	?	?	7.6	Broken
VIII	1010	V	Ovis / Capra	M3	?	D	4.4	
VIII	1010	V	Ovis / Capra	M3	?	?	1.7	fragment
VIII	1012	V	Bos	M3	Lower	D	36.1	
IX	1012	V	Cervid	M1	Lower	E	10.2	
VIII	1012	V	Ovis / Capra	P4	Lower	E	1.8	
IX	1012	V	Ovis / Capra	M2	Lower	D	2.8	
IX	1012	V	Ovis / Capra	M1	Lower	E	4.3	
VIII	1014	V	Bos	P4	Lower	E	8.3	
VIII	1014	V	Bos	P4	Upper	F	5.3	
VIII	1014	V	Bos	M2	Lower	F/G	23.2	
VIII	1014	V	Cervid	M3	Lower	E	31	
VIII	1014	V	Cervid	M2	Upper	E	8.1	
VIII	1014	V	Cervid	M2	Upper	E	9.2	
VIII	1014	V	Cervid	P2	Upper	E	7.6	
VIII	1014	V	unident	tooth frags				
VIII	1018	V	Bos	M3	Lower	E	31.3	
VIII	1018	V	Bos	M3	Lower	E	14.3	

Table 16.2: 2 Charsadda animal teeth listed by context

Trench	Context	Period	Species	Element	Position	Wear	Weight	Comments
VIII	1018	V	Cervid	M	?	D	13.9	
VIII	1018	V	Cervid	M2	Upper	E	14.3	
VIII	1018	V	Cervid	M	?	?	7	
VIII	1018	V	Cervid	M1	Lower	C	8.4	
VIII	1018	V	Cervid	M	?	?	4.2	
VIII	1018	V	Cervid	M3	Lower	F	20	
VIII	1018	V	Cervid?	I	?	E	2.3	
VIII	1018	V	Ovis / Capra	M1	Lower	D	3.9	
VIII	1020	V	Bos	M1	?	?	6.8	Broken
VIII	1020	V	Cervid	M1	Lower	G	5	
VIII	1020	V	Ovis / Capra	M2	Lower	E	5.4	
IX	1048	V	Cervid	M	Lower	F	6.4	
IX	1053	V	Bubalus?	M	Upper	?	18.8	
VIII	1053	V	Ovis / Capra	M1	Lower	E/F	2.7	
VIII	1053	V	Ovis / Capra	M3	Lower	E	3.6	
VIII	1053	V	Ovis / Capra	M2	Lower	E	6.8	
IX	1053	V	Ovis / Capra	M3	Lower	E	4.8	
IX	1058	V	Cervid	M2	Lower	E	12.5	
IX	1058	V	Ovis / Capra	M2	Lower	D	11.9	mand frag
IX	1058	V	Ovis / Capra	M2	Lower	E	2.6	
IX	1058	V	Ovis / Capra	M3	Lower	F	9.5	
IX	1058	V	Ovis / Capra	M3	Lower	F	7.5	
IX	1067	V	Bos	P4	Upper	F	8.2	
IX	1067	V	Bos	P3	Upper	F	8.9	
IX	1067	V	Bos	P4	Lower	F	5.3	
IX	1067	V	Bos	M1	Lower	F	14.1	
IX	1067	V	Bos	M1	Upper	E	10.6	
III	1	VI	Bos	M1	Upper	G	10.6	
III	1	VI	Bos	M2	Lower	G	11.6	
III	1	VI	Bos	I			2.5	
III	1	VI	Bos	I			3.1	
III	1	VI	Canine				0.2	
III	1	VI	Cervid	M2	Upper	H	7.4	
III	1	VI	Cervid	M			2.5	
III	1	VI	Cervid	P3	Upper	D/C	2.4	
III	1	VI	Cervid	M2	Lower	F	4.6	
III	1	VI	Equid	M2	Lower		43.1	
III	1	VI	Ovis / Capra	P4	Lower	H	1.2	
III	1	VI	Ovis / Capra	M1	Upper	H	0.9	
III	1	VI	Ovis / Capra	I			1.7	
III	1	VI	Ovis / Capra	M2	Upper	F	3.8	
III	1	VI	Ovis / Capra	M1	Lower	H	2.7	
III	1	VI	Ovis / Capra	M1	Lower	E	3.8	
III	1	VI	Ovis / Capra	I			0.7	
III	1	VI	Ovis / Capra	M1	Lower	D	3.2	
III	1	VI	Sus	M1	Lower	C	1.8	
III	1	VI	Sus	M2	Lower	D	2	
VIII	1000	VI	Bos	P3	?	E	6.5	
VIII	1000	VI	Ovis / Capra	P3	Lower	F/G	1.1	
VIII	1000	VI	Ovis / Capra	M1	Lower	E	2.4	
VIII	1001	VI	Ovis / Capra	M	Lower	F/G	0.9	
VIII	1035	VI	Ovis / Capra	M1	Upper	D	1.5	

Table 16.2 (cont.) Charsadda animal teeth listed by context

Period	Context	Species	Wear Stage
II	57	Bos sp.	N
II	57	Bos sp.	F
II	57	Bos sp.	H
II	57	Bos sp.	E
II	57	Bos sp.	G
II	57	Bos sp.	G
II	57	Bos sp.	H
II	57	Ovis / Capra	C
II	60	Ovis / Capra	-
II	60	Sus sp.	E
II	60	Sus sp.	-
II	1054	Bos sp.	H
V	35	Bos sp.	-
V	41	Bos sp.	-

Table 16.3: Charsadda: unidentified bones by context and phase

Period	Context	Species	Wear Stage
II	57	Bos sp.	N
II	57	Bos sp.	F
II	57	Bos sp.	H
II	57	Bos sp.	E
II	57	Bos sp.	G
II	57	Bos sp.	G
II	57	Bos sp.	H
II	57	Ovis / Capra	C
II	60	Ovis / Capra	-
II	60	Sus sp.	E
II	60	Sus sp.	-
II	1054	Bos sp.	H
V	35	Bos sp.	-
V	41	Bos sp.	-

Table 16.4: Charsadda animal teeth age estimation from in-situ archaeological contexts

Animal taxon	Aligrama	Balambat & Timargarha	Bir-kot-ghundai	Ghaligai	Kainke-derey	Loebanr III
Wild						
wild cat (*Felis* sp.)	Y					Y
tiger (*Panthera* sp.)						Y
barking deer (*Muntiacus muntjak*)				Y	Y	Y
hog deer (*Axis porcinus*)				Y		Y
deer (*Cervus* sp.)	Y	Y			Y	Y
Himalyan goral (*Naemorhedus goral*)					Y	Y
markhor (*Capra falconeri*)						Y
hare (*Lepus* sp.)		Y				Y
porcupine (*Hystrix indica*)				Y		Y
snake sp.		Y				
Domestic						
dog (*Canis familiaris*)	Y		Y		Y	Y
pig (*Sus scrofa domesticus*)	Y		Y		Y	Y
zebu (*Bos indicus*)	Y		Y	Y	Y	Y
buffalo (*Bubalus bubalus*)	Y					
horse / donkey (*Equus asinus / caballus*)	Y	Y	Y	Y	Y	Y
goat / sheep (*Capra hircus / Ovis aries*)	Y	Y	Y	Y	Y	Y

Table 16.5: Swat and Dir sites: summary of animal remains (sources: Bernhard 1967; Compagnoni 1987; 1979; Dani 1967; Jawad 1998)

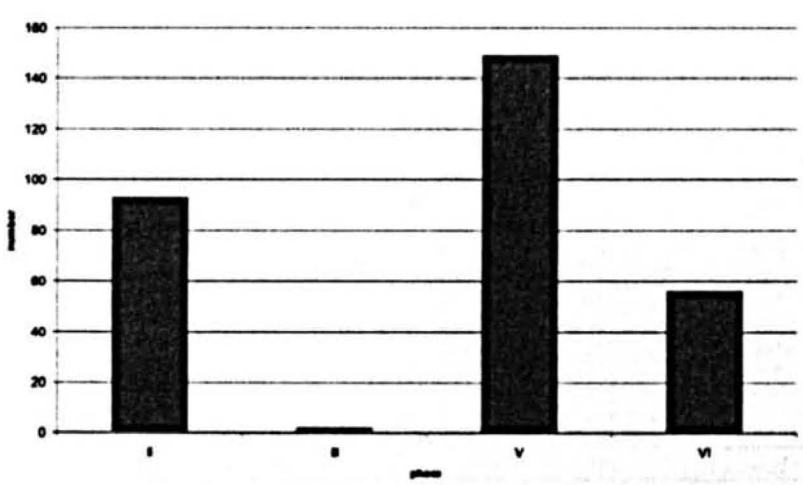


Figure 16.1: Charsadda animal bones by period (identified to species)

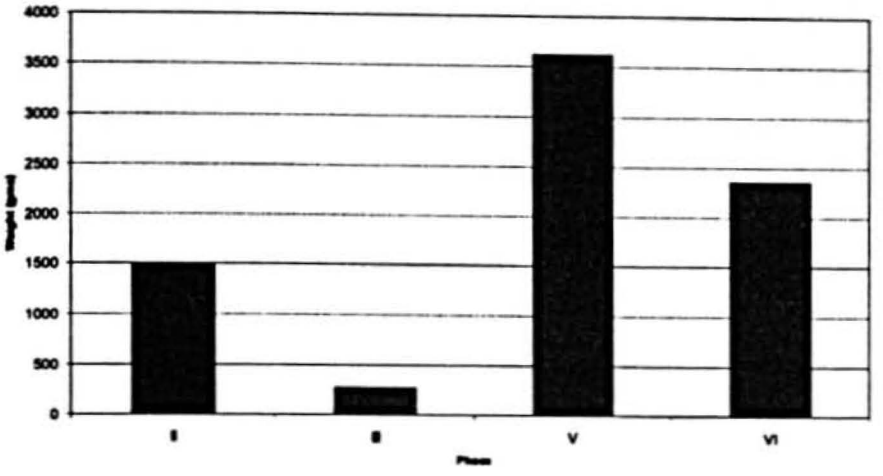


Figure 16.2: Charsadda animal bones by period and weight

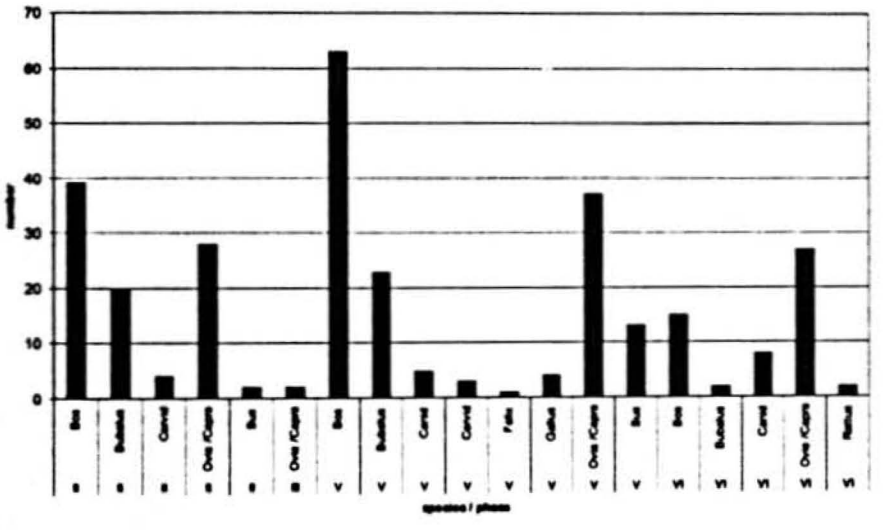


Figure 16.4: Charsadda MNI by period

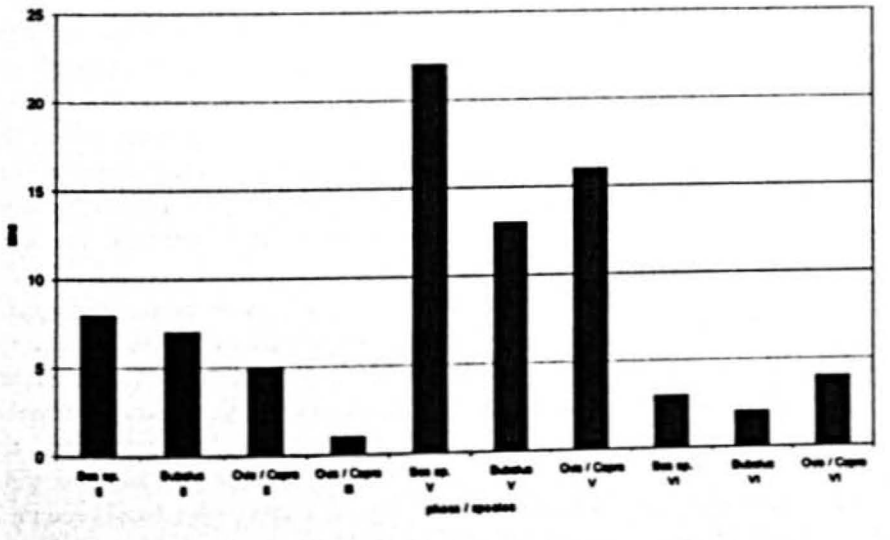


Figure 16.3: Charsadda NISP by period

CHAPTER 17

THE REGIONAL SYNTHESIS: A CONCLUSION

Robin Coningham, Ruth Young & Ihsan Ali

17.1 INTRODUCTION

As noted in Chapter 1, when Sir Mortimer Wheeler first visited the Bala Hisar of Charsadda in the 1940s, he was struck by its potential to shed light on the development of South Asia's Early Historic cities. Indeed, he stressed that 'The outstanding importance of Charsadda lies in its earlier phases, when it was a metropolitan centre of Asiatic trade and meeting-place of oriental and occidental cultures' (Wheeler 1950: 51). He was also convinced that the Early Historic city would demonstrate itself to be strongly linked to its South Asian predecessors 'No other site is so likely to yield a complete culture-sequence from the period of the Indus valley civilisation, through Vedic times, into the historic period' (Wheeler 1950: 51). Despite these early suggestions of continuity, by the time Wheeler finished his excavations at the Bala Hisar in 1958, he believed that the city's origins were no earlier than the 6th century BC and could be attributed to an Achaemenid colonial foundation, stating in one publication that 'Charsada on the Peshawar plain and far-famed Taxila in the Punjab... are memorials to the *pax persica* of the latter half of the 6th century BC' (Wheeler 1959: 172) and in another that 'It is here inferred that... Pushkalavati should be associated with the pacification of the region by Cyrus or Darius' (Wheeler 1962: 13). The irony is, as pointed out in Chapter 1, that at the same time that he was working in the lower levels of the Bala Hisar, Tucci, Silvi Antonini and other Italian archaeologists were encountering similar material in a series of prehistoric cemeteries in the valleys to the immediate north of the Vale of Peshawar (Silvi Antonini 1963; Tucci 1963). We can but wonder how different the course of Early Historic urban studies in South Asia would have been, had Wheeler realised that his earlier model of continuity model from the 1940s was proven. but that his later model of colonisation model from the 1960s was already refuted.

Despite concerns about the early dating of the basal levels of the Bala Hisar voiced by Stacul and Tusa (1977), it was not until 1982 that the topic of Early Historic urban development was reopened. Raymond Allchin published a provocative paper titled 'How old is the city of Taxila?' arguing that the presence of 'Red Burnished Ware' at Hathial suggested a far greater antiquity for the site than previously assumed, between 1000 and 700 BC rather than 500 BC (Allchin 1982: 13). However, he tempered this with two synthetic papers in 1989 and 1990 which clearly differentiated the level and date of urban or incipient urban development in a precocious Ganges basin with what he termed the north-west borderlands, suggesting that Charsadda and Taxila shared 'with the smaller sites of the northern valleys, particularly Swat, a distinctly 'Gandharan' regional cultural style. Thereafter they begin (presumably coinciding with Mauryan imperial expansion, starting from Magadha) to exhibit a cultural style which in many respects reflects that of the Ganges valley' (Allchin 1989: 7). He concluded that 'Achaemenid rule may well have contributed to the development of cities in the north-west' (ibid.). This hypothesis was strengthened in 1990 in a second paper which stressed that the 'north-west borderlands' were 'heavily influenced by their relative remoteness, and by the presence of successive imperial powers, first the Achaemenids from the west, and then the Mauryans from the east' (Allchin 1990:167). This model was shared by others, including Chakrabarti who stated that 'I believe that the political and economic influence of the Achaemenidian (sic) empire served as a major stimulus to the early historic urban growth of this area' (1995: 242).

A second pervasive influence on explanations of settlement development is also apparent, that of the differentiation between uplands and plains, as demonstrated by Wheeler's comments that there were 'two essentially different social systems: the semi-mobile peoples of the heights...[and]...the settled population of the vale' (Wheeler 1950:11). This influence clearly borrowed from the memory of successive campaigns of pacification waged by the Mughals, Sikhs and British in the Vale of Peshawar and its surrounding valleys, and the construction of strongholds at key points such as at Peshawar, Attock, Hund, Malakand and Chakdara (Dani 1995) (Plate 17.1). The isolation and 'otherness' of Peshawar's feeder valleys is not just stressed within the orientalized fiction of Kipling (1901) but is also found in authors such as Dani who suggests that the northern valleys formed a 'less developed hill zone' (Dani 1992: 396) and that its communities were 'isolated in hill pockets and survived with their traditional patterns (ibid.: 419). This, the final chapter of the monograph, will discuss the developmental sequence and character of the Bala Hisar of Charsadda and its region in the light of these models of continuity and change and will develop alternative perspectives and interpretations.

17.2 THE SEQUENCE OF THE VALE OF PESHAWAR AND ITS NORTHERN VALLEYS (c. 1700–1400 BC)

The vast majority of evidence for this period does not come from the Vale of Peshawar itself, but rather from its northern valleys, and Swat in particular. This period corresponds to Stacul's Swat Period IV, and is dated to between c. 1700 and 1400 BC and attributed to the late Bronze Age (Stacul 1987). In comparison with the limited numbers of sites (2) belonging to the preceding periods (ibid.: 53), this period is well represented within the Swat valley with occupation continuing within the Ghalegai rock shelter as well as at a number of new open sites, including Loebanr 3, Bir-kot-ghwandai, Aligrama, Damkot, Barama, Kalakoderay (ibid.). This expansion includes sites located in the main Swat valley as well as in small feeder valleys at a variety of locations including low slopes and saddles. The settlements have two phases, as illustrated by Loebanr 3, which has an early phase comprising the well-known pits, succeeded by a phase of structures with rectangular dry-stone walls on the surface (Stacul 1995). The Kherai cemetery in neighbouring Indus Kohistan has also been attributed to this period, making it one of the earliest known formal cemeteries of the northern valleys, but with notable differences from the later Gandharan Grave Culture (Stacul 1987: 71).

Stacul recognises this period as one of substantial change, with a series of major settlement and economic changes (ibid.: 120–122). The first of these changes is the establishment of new open-air settlements on the hilltops or hill slopes of the Swat valley and its tributaries. Stacul also stresses that such locations, close to streams and torrents, allowed the development of 'polycultivation, including various species of cereals and legumes which contribute towards what was one of the most varied diets in the area of the sub-continent' (ibid.: 121) (Plate 17.2). Although some scholars favour an interpretation of the earlier phase of pits as habitations, it has been argued that such features represent grain silos, demonstrating an increasing production and curation of surplus (Coningham & Sutherland 1998). This period also sees the final phase of black-on-red painted vessels as well as the development of a number of wares and vessel forms, which will come to define the Gandharan Grave Culture, namely the black and grey burnished wares, pedestal and bicone vessels and jars with sharply everted rims, some of which even have rippled or cut decorations around the rim (Stacul 1987: 81–85). There is evidence for the use of copper objects alongside bone and stone tools, but occasional finds of iron objects have been dismissed as intrusive (ibid.: 97). The evidence of iron objects and iron-working in the lowest levels of the Bala Hisar now questions the intrusive explanation and suggests that iron was also available, although probably in low quantities, during the final phases of Swat Period IV. Stacul also identifies the establishment of two important regional and long-distance trade networks during this period. The first network is with the 'plains areas of the sub-continent', as represented by the recovery of shell and carnelian, respectively from the Arabian Sea and western India, and the second is with 'a northern area', as represented by lapis lazuli, jade and star and wheel-shaped beads (ibid.: 101, 121). Stacul is also very clear in paralleling the shift from pits to surface structures during this period in the Swat valley, with a very similar shift in the Kashmir valley providing a broader regional perspective (ibid.: 126).

As noted above, evidence of this period in the Vale of Peshawar is very limited, reliant on the radiocarbon dates of c. 1400 BC from the basal levels of the Bala Hisar of Charsadda. We do find pits in the early phases of our occupation within the habitation layers of trench Ch. VIII/IX but nothing that could be linked with the bell-shaped tradition of the Swat valley, although our trench size was limited. However, Sf 495, a rectangular schist object with a small hole pierced at one end and has a wedge-shaped profile with a rough reverse and highly polished obverse is very similar to Stacul's category of 'rectangular holed sickles' (Stacul 1993: 75). Identified in the Swat and Kashmir valleys as tools for multiple functions such as 'weeding, skinning, scraping and harvesting' (Stacul 1994a: 710), this is the first example to have been recovered in the Vale of Peshawar, although it was eroded and redeposited in a later context. It is possible that a further example of this category, again redeposited in a later context, is represented by an object recovered from Shaikhan Dheri but catalogued as a 'whetstone and sharpener' by its excavator (Dani 1966: 114). The presence of these two objects combined with the Bala Hisar's position on a natural mound of clay standing above the active flood plain, suggests that the successful settlement expansion of settlement sites in Period IV was not merely restricted to the northern valleys but may have also initiated agricultural settlements down in the Vale as well. The earliest levels at the Bala Hisar of Charsadda, directly above natural clay as exposed in trench Ch. VIII, also yielded examples of jars with sharply everted rims with rippled or cut decorations, a class already attributed to Swat Period IV (Stacul 1987: 81–85). Another artefact with links to Swat Period IV is incomplete terracotta figurine Sf 483, although it was recovered from within the fills of a later robber pit (see Section 12.2.1). It conforms to the early tradition of being two-dimensional with a fiddle-shaped profile (Stacul 1987: 110), and has a decoration on its body comprising a large central depression surrounded by two circles of smaller depressions which are in turn surrounded by a circle of six larger depressions. These features suggest greater affinity with those early examples from Period IV (Stacul 1987: Plate XLV) than the later corpus from the Gandharan Grave Culture (Silvi Antonini & Stacul 1972; Vinogradova 2001). It is also possible that some of the black on red decorated sherds from Period II at the Bala Hisar are related to Swat IV's late Bronze Age assemblage which fails after c. 1400 BC (Section 8.5). Unfortunately, no identifiable archaeobotanical or archaeozoological samples were recovered from these early levels at the Bala Hisar making it impossible to compare the subsistence strategies of the early settlement phases in the plain with those pursued in the hills to the north. It is equally unfortunate that settlement evidence for this period in the Vale is restricted to the Bala Hisar of Charsadda but, as

Wheeler noted on his first visit to the site, most of the overburden had been removed on the eastern side allowing excavators easy access to early levels. In order to extend our knowledge of this period in the Vale of Peshawar, deep excavations at the Bala Hisar of Charsadda are required, and it is also important to augment our data set with the inclusion of information from other sites. The depth of alluvium deposited by the Kabul and Swat rivers, however, will make the identification of such sites extremely difficult. The distribution of contemporary sites more broadly within the region is uncertain, with the exception of the Vale of Kashmir (Sharif & Thapar 1992).

17.3 THE SEQUENCE OF THE VALE OF PESHAWAR AND ITS NORTHERN VALLEYS (c. 1400–400 BC)

Whilst Stacul attributes the transition from Swat Period III to IV as one of 'relative stability, with changes promoted mainly by internal rather than external factors' (Stacul 1987: 125), the transition from period IV to V is held to be 'not yet clear' but that at Bir-kot-ghwandai 'disconnected and fragmentary human remains may testify to dramatic events preceding the end of this cultural cycle' (ibid.: 126). Indeed, he stresses that by the 14th century BC, a new uniform culture spread throughout the northern valleys accompanied by increasing settlement and cultivation but that this development was isolated 'progressively sealing off this area from its surrounding regions, particularly the western plains of the sub-continent' (Stacul 1987: 126). This new uniform culture was, of course, the Gandharan Grave Culture defined by Dani as comprising 'a pattern of living in the hill zone of Gandhara, as evidenced in the graves, and shows how the peoples, who were equipped with poor bronze and iron tools and weapons, adapted themselves to the natural resources' (1966: 25). If the transition from Ghalegai Period III to IV represented a dramatic expansion in the number of sites, the transition from Period IV to V represents an exponential growth in site numbers, as indicated by their most obvious feature: cemeteries (Plate 17.3).

Confusingly divided in different ways by scholars (Stacul's Ghalegai Period IV is termed Grave Period I by Dani; Stacul's Ghalegai Period V is termed Grave Period II by Dani; Stacul's Ghalegai Period VI is termed Grave Period III by Dani; Stacul's Ghalegai Period VII is termed Grave Period IV by Dani) (Dani 1992: 411; Stacul 1987), Vinogradova has recently produced a new periodisation for the cemeteries, which is adopted here (2001). Reanalysing a total of 573 burials, she has offered a new tri-periodisation for the cemeteries of the northern valleys (2001: Table 7). From the presence of a single cemetery at Kherai in the western edge of the Indus watershed in the preceeding Ghalegai Period IV (of Stacul's Swat chronology), Period I of the Gandharan Grave Culture is found spread throughout the main Swat valley and its tributaries with cemeteries at Katelai, Loebanr I, Butkara II, Thana, Tilgram and Gumbatuna (Vinogradova 2001: Table 7). An increased utilisation of the Vale of Peshawar is also suggested by the construction of the cemetery site of Zarif Karuna during this period, some 25km east of the Bala Hisar of Charsadda. During Period II of Vinogradova's sequence, the number of cemeteries increases to 10, including Katelai I, Loebanr I, Butkara II, Zarif Karuna, Thana, Aligrama, Nazahel, Barikot I and Pashnel in the Swat valley and Tamunak in the Chitral valley. The final period of the Grave culture comprises nine known graveyards at Katelai I, Loebanr I, Butkara II, Thana, Tarike, Lalbatai, Pulanr in the Swat valley and Noghormuri in the Chitral valley (Vinogradova 2001: Table 7). There are problems with this data set, as there are very few radiocarbon dates, and some areas, like the Swat valley, have been well sampled whilst other, like the Chitral valley, less so with the result that a single season of survey in 1999 identified 15 cemetery sites in the middle Chitral valley (Ali *et al.* 2002) and a further 8 during survey in 2004 (I. Ali pers. comm.). An additional problem is that a further 20 Gandharan Grave Culture cemeteries have insufficient features to be articulated with Vinogradova's relative chronology. Unfortunately, four of these cemeteries are also found within the Vale of Peshawar, namely at Jamalgarhi, Panchpir, Maneri Payn and Tarbela. Finally, it has been noted that certain elements of the sequence, such as those equivalent to Swat Period VII, are 'ephemeral' and are only found at certain categories of sites, the cemeteries and not larger settlement sites (Vogelsang 1988: 109).

Far less well attested, and not as archaeologically visible, are the settlement sites of this period. Rather than relying further on Stacul's Swat chronology (1967; 1969; 1987), Vogelsang's ceramic sequence (1988; 1992) has been adopted here for the purposes of examining the settlements of the Vale of Peshawar and its northern valleys. This allows both internal and external comparisons without being overly reliant on, or concerned with, the significance of one or two radiocarbon sites per site. As noted in Chapter 7, this relative sequence of Vogelsang's identified a 'local' ceramic sequence which was later augmented by an 'Indic' cohort and, finally, by a western or 'Aegaeic' cohort or flavour. The first assemblage is easily recognised through the presence of two of Wheeler's types, 'Rippled Rim' and 'Soapy Red Ware' with strong typological and stylistic links with the ceramics of Swat Period V (Dittmann 1984: 159; Vogelsang 1992: 250). During this period in the Swat valley, settlement numbers expanded, paralleling the expansion in the number of cemetery sites. The settlements at Aligrama, Bir-kot-ghwandai, Damkot, Kalako-deray, Loebanr III and rock shelter of Ghalegai in the Swat valley continued to be occupied and are augmented by the settlement of Balambat in the Dir valley. At Aligrama, this period accounts for the accumulation of up to four metres of deposition, including phases of rectangular structures of rough stone and cobbles and circular stone-lined storage pits. These structures were augmented by terracotta figurines and ceramic forms also found 'in the earliest layers of Charsadda, excavated by Sir Mortimer Wheeler' (Stacul 1979: 90). This period is also found at Bir-kot-ghwandai in contexts 5, 6, 7 and 8, and included carinated burnished beakers, terracotta human and animal figurines, bone pins and a terracotta biconical spindle-whorl (Stacul 1978). In stratum 15 of the Ghalegai

shelter sequence, equating to Swat Period V, artefacts included vessels of burnished ware, vessels with 'Rippled Rim', polished stone grinders, copper objects, bone arrowheads and a spatula, and a marine shell bangle (Stacul 1969). Finally, at Balambat in the Dir valley, evidence of Vogelsang's 'local' flavour is found in the lowest levels in layer 1 of Dani's deep pit in the northern zone of the settlement, complete with examples of vessels of 'Rippled Rim' (Dani 1967: Figure 51), although Layer 2 clearly has vessels associated with Vogelsang's 'Indic' flavour (Dani 1967: Figure 53).

The majority of the early occupation relating to Vogelsang's primary assemblage at the Bala Hisar of Charsadda was identified within the lower levels of trench Ch. VIII. There, Structural Phases 8.B and 8.D, yielded evidence of vessels of 'Rippled Rim' and Red and Black/Grey Burnished ware and with only a single sherd of Vogelsang's second, 'Indic' assemblage found within context 55. With radiocarbon dates of between c. the 14th century BC and the beginning of the first millennium BC, structural remains consisted of cobble filled pits, succeeded by buildings of large clay slabs, quarried from the edges of the clay mound. This feature marks a clear difference in resource use between the settlement on the Bala Hisar and those of the northern valleys, presumably dictated by the absence of suitable stone sources in the vicinity of Charsadda. In addition to the clear ceramic affinities with the northern valleys (Dittmann 1984: 159), similarities are also found amongst other artefact categories including Sf 993, an anthropomorphic figure carved from a sherd of Black/Grey Burnished ware (Silvi Antonini & Stacul 1972: Plate LIII nos. a & b) and Sf 1065, a biconical bead or spindle-whorl of terracotta (Stacul 1978: 148). Worked bone bead Sf 965 with chamfered ends unfortunately has few analogies.

Survey in Charsadda District by Ihsan Ali has indicated that settlement in the Vale of Peshawar also expanded during this period, paralleling the appearance of cemetery sites. Thus the Bala Hisar of Charsadda is joined by nearby developments at Sari Dheri (Wheeler 1962: 48), Jhara Sikander Abad (Ali 1994: 67, 77) and Nisatta (Ali 1994: 67), as indicated by scatters of related assemblages of Burnished Red Ware, pedestal vessels and everted jars with cut rim decorations. Jhara Sikanader Abad is 11km north of the Bala Hisar of Charsadda, Nisatta 10km south-east, and Sari Dheri, or Sardheri, 13km east (Ali 1994: Map 1). It is also during this Period, Swat Period V, that a settlement is established on the western mound of Hathial A in the Taxila valley (Dani 1986: 37; Allchin 1982). Finally, it is interesting to note that two carinated sherds, apparently similar to those from the Red Burnished Ware tradition, were recovered from Hussaini Boi Ziarat mound at Akra, although the context is unclear (Khan *et al.* 2000: Figure 7, nos. 1 & 2). Should this preliminary report be confirmed, these sherds will be the furthest south that this ware has been reported and demonstrate an expansion of links both to the east to Taxila and south to Bannu prior to arrival of Vogelsang's second assemblage.

Vogelsang's second, 'Indic', flavour comprises an assemblage of open bowls, open carinated bowls and beehive spindle-whorls (Vogelsang 1988: 106) and he suggests that it covers Swat Period VI–VII (Vogelsang 1992: 250). This assemblage is noticeably absent from the corpus of artefacts recovered from cemeteries affiliated with Gandharan Grave Culture, suggesting an increasing stylistic division between the Bala Hisar of Charsadda and the cemeteries of the northern valleys. Interestingly, it also seems that in this period there is also a division between the assemblages of the cemeteries and the larger settlements of the Dir and Swat valleys, and there are greater culturally affinities with these settlement sites and Charsadda, than between the northern valley settlements and necropoli (Vogelsang 1992: 250). Indeed, the 'Indic' flavour is present in Ghaligai in stratum 12 with a variety of open bowls and carinated open bowls (Stacul 1969: Figure 13), in Layer 4 at Bir-kot-ghwandai with schist beehive-shaped spindle-whorls or beads (Stacul 1978: 148) and in the upper layers of Trench E at Aligrama with carinated open bowls and beehive-shaped spindle-whorls or beads (Stacul & Tusa 1977: 160–162) with similar examples from Kalako-deray (Stacul 1997: 375). An 'Indic' assemblage is also found in Layer 2 of Dani's trenches in the northern zone of the settlement at Balambat (Dani 1967: Figure 53). This assemblage is also very clear at the Bala Hisar of Charsadda in trench Ch. VIII with finds of carinated bowls with everted rims and *thali* forms within Structural Phase 8.D and in trench Ch. VI in Structural Phase 6.A (Section 8.3.1.1.10 & 8.3.1.1.13).

There are deviations from this model, however, with the presence of a beehive-shaped bead or spindle-whorl (Sf 1051) from the rather earlier context of Structural Phase 8.B in trench Ch. VIII at Charsadda. It should also be noted that open bowls are also present in the very lowest levels of the Bhir Mound in the Taxila valley to the south (Sharif 1969: Figure 11) and are also apparently featured in photographs of ceramics recovered from the western mound of Hathial A (Dani 1986: Plate 13). Although carinated vessels from early contexts at Akra have been termed 'Iranian inspired' by their excavators (Khan *et al* 2000: Figure 4), most scholars would ascribe such an assemblage to Wheeler's 1962 and Vogelsang's 1988 concept of an 'Indic' flavour. Indeed, as already noted in Chapter 7 and Chapter 8, such forms have very close analogies with forms in the lower levels at Hastinapura and other core Gangetic sites (Wheeler 1962: 40; Vogelsang 1988: 111). Vogelsang's third flavour, the western or 'Aegaeic' corpus, mainly comprises the so-called 'Tulip Bowl' with its Achaemenid links (Vogelsang 1988: 104). This key fossil type again is not found within the cemetery contexts of the northern valleys but is found in the settlements, with examples at Aligrama (Stacul & Tusa 1977: 187) and one possible example from Kalako-deray (Stacul 1993: 84). 'Tulip Bowls' were notably absent from Balambat (Dani 1967). The earliest examples of Tulip bowls at the Bala Hisar of Charsadda are in the very final contexts of Structural Phase 8.D in trench Ch. VIII as well as in Phase 6.B of trench Ch. VI and Phase 3.A of trench Ch. III (Section 8.3.1.1.3). They have also been found from Period III onwards at the Bhir Mound of Taxila to the south (Sharif 1969: Figure 19, no. 1).

Whilst Vogelsang's three-fold sequence may be applied to both the Bala Hisar of Charsadda and a number of the settlements within the valleys to its north, there are still a number of notable differences between the two, when comparisons beyond the ceramics are explored. For example, when we consider the archaeozoological remains from both sets of settlement sites, there is a greater range of both domesticated and wild animals in the valleys than at Charsadda. Occupants of the latter relied heavily on cattle and buffalo, with mainly aged specimens in the archaeological record, quite unlike the very broad spectrum of animals from the valleys to the north even at other proto-urban sites like Bir-kot-ghwandai (see Section 16.6). This pattern is repeated in the archaeobotanical evidence, with a far greater range of wild and domesticated plants utilised in the northern valleys than at the Bala Hisar of Charsadda with its apparent reliance on wheat and lentil. This is not to suggest that the Bala Hisar was solely relying on local resources as the wood charcoals from Structural Phase 8.B in trench Ch. VIII attest to the presence of acacia, shisham, mulberry, olive and deodar (see Section 15.3). Of these woods, deodar is found in the valleys of Swat and Dir to the north and mulberry to the arid hills to the south of the Vale of Peshawar, demonstrating the presence of strong local networks.

17.4 CORES AND PERIPHERIES: A NEW PERSPECTIVE

Having thus outlined the parallel cultural sequences within the Vale of Peshawar and its northern valleys, it is now necessary to reconsider how they fit within the dominant models of cultural change and continuity for the region. Clearly, the foundation of the settlement at the Bala Hisar of Charsadda predates the advent of Achaemenid influence in the region of Gandhara, refuting the colonisation model advocated by Wheeler in 1959 and 1962. Indeed, its earliest levels would suggest that the natural clay mound at the site was first occupied in c. 1400 BC and that by the first millennium BC its eastern sides had been defined by a ditch and mudbrick complex. Furthermore, if we assume that this ditch followed the contours of the site, it suggests that it may have enclosed an area of some 12 hectares. Offering clear parallels with Kandahar, Hathial (Taxila) and Akra (Bannu), it suggests that a number of regional centres were firmly established by the beginning of the first millennium BC in the north-west. This evidence not only refutes the diffusionistic models of Wheeler (1959; 1962), Allchin (1989; 1990) and Chakrabarti (1995) but it also stresses the links between these centres and their immediate hinterlands. For example, Akra may be linked to a number of smaller sites within the Bannu Basin (Magee *et al.* 2005) and the Bala Hisar with a cluster of Swat Period V sites within the Vale of Peshawar as well as with the more numerous sites of Dir, Chitral, Indus and Swat valleys to the north. This second feature also clearly refutes the concept that the Vale of Peshwar and its northern valleys were isolated or remote. Indeed, the cultural links between the Swat Valley and the Bala Hisar in Period IV and V have been clearly demonstrated throughout this volume and our combination of evidence from the Swat and Charsadda sequences demonstrates that this region was not marginal or remote but a core conduit for movement between west, south and central Asia. The final model to refute is the suggestion that the northwest was heavily influenced by later Gangetic expansion in the 3rd century BC (Wheeler 1962: 35; Allchin 1989: 7). The presence of 'Indic' wares within the sequence at the beginning of the first millennium BC clearly refutes this model and begs serious re-evaluation of the separateness of the Iron Age urban phenomenon on South Asia as it links the Gangetic 'core' with the north-western 'periphery' in a hitherto unconsidered way at an extremely early date.

Whilst the refutation of old diffusionistic and orientalized models is easy, the development of new models is far more complex as will be demonstrated here. Having discussed the revised sequence and chronology of the Bala Hisar, it is now possible to consider the nature of contact between the communities of the Vale of Peshawar and its northern valleys from the 14th century BC onwards. However, rather than looking at these two areas as separate and following different developmental trajectories, we will offer an alternative model which takes into account different modes of contact and development. This alternative perspective is based on the premise of physical contact between the inhabitants of the Bala Hisar of Charsadda and the communities of the northern valleys from the end of Swat Period IV and into Period V. While the Malakand Hills form part of the northern boundary which delineates the Vale of Peshawar's basin (Dichter 1967: 91–92) and might be perceived as a barrier to communication and contact, it is clear that its many passes have ensured contact. Whilst much of this contact has been long distance trade, as indicated by the presence of exotics such as cowry *Turbinella pyrum* (Section 14.4), carnelian and lapis (Section 11.9), a more neglected aspect of contact and movement is via the medium of transhumance, that is individuals or groups of people moving seasonally in order to obtain optimal conditions for their animals.

Pastoral mobility has been broadly acknowledged to be an extremely important subsistence strategy from many different parts of the work from antiquity. For example, Gilbert has recorded archaeological evidence for pastoral nomads in south western Iran from 6000 BC (1983: 107), while recent work by Mashkour (2003) in the Zagros region has explored the potential for combining scientific, ethnographic and archaeological approaches in order to understand transhumant activity in the past. Mughal's survey of the Cholistan Desert in Pakistan has shown that pastoral nomadic groups in this region were numerous, and had considerable contact with sedentary groups integrated within the urban Harappan framework (1997: 56, 1994: 53). Recent ethnographic work around the site of Charsadda itself and in the valleys of Swat and Dir (Young 2003) has also demonstrated the importance of transhumance within this landscape and the benefit of its links. During this study, a range of modern strategies were identified, ranging from long distance transhumance through to sedentary agriculture, and this complexity of subsistence approaches is interesting in terms of understanding

variation in utilising the land. With regard to contact between Charsadda and the northern valleys, a number of individuals interviewed in both areas were identified as winter transhumants with a permanent home in either Swat or Dir but who travelled with their animals down into the Vale of Peshawar for the winter (Young 2003: 65–66) (Plate 17.4). All those interviewed said that they did this because their grandparents, their great-parents and so forth had done it, and it was clearly a well-established pattern with historical roots. In most cases, whole family groups undertook the move south in October or November, followed by a return trip in mid-April, occasionally leaving a single (male) family member at home to look after buildings and crops in the valleys. One very interesting element of this transhumant movement was that the majority of those interviewed said that they returned year after year to the same farm or house in the Vale of Peshawar, and that their forebears had established this contact.

Further interviews with farmers in Charsadda District confirmed this, and made the symbiotic nature of this relationship clear. Those from the northern valleys were able to return to a known place where the needs of their animals were met, and they were also able to earn cash by working on the southern wheat harvest in early April, before returning north. As well as having a regular casual supply of labour for wheat harvesting, and working on *gur* production, unrefined cane sugar (Mian 1955: 52), the farmers of the Charsadda District were able to make use of a good supply of dung from the visiting herds, important for fuel, building and fertiliser (Plate 17.5). Before applying this established seasonal relationship between the Vale of Peshawar and its northern valleys to the past, it should be acknowledged that a number of crucial environmental, political, religious and ideological changes have occurred in the last millennium (Young 2003: 21). Although we have no direct archaeological evidence to demonstrate that transhumance was a regular strategy in the prehistory of the region, it provides a fresh approach to discussing the developmental sequence of the north-west – one which can be subsequently tested.

As discussed above, early contact between the two areas is suggested by overlapping radiocarbon dates and the presence of a rectangular holed sickle (Section 11.5), a fiddle-shaped human figurine (Section 12.2.1) and jars with sharply everted rims rippled or cut decorations (Section 8.3.1.1.1) at the Bala of Hisar. This evidence confirms linkages between the northern valleys and the earliest stages of occupation at Charsadda in c. 1400 BC. However, rather than suggesting that Charsadda was an core community within the Vale of Peshawar, we would suggest that in its earliest stages it represented part of Swat's periphery (Figure 17.1). Indeed, the focus at this time, Swat Period IV, is in Swat itself with an expansion of settlement out from rock shelters and caves and into a variety of different locations within the main Swat valley and its tributaries. Stacul has stressed that the success of this expansion was based on the location of open-air settlements next to torrents, allowing intensive 'polycultivation' with a deliberately broad spectrum subsistence ranging from rice and wheat to peas and lentils and grapevine and linenseeds (1987: 69) supported by cattle, sheep/goat and large hunted mammals. Developing this scenario, Young has suggested that whilst the natural fertility of Swat and Dir, in comparison to the Vale of Peshawar, when irrigated, would have permitted settlement intensification and population growth, this fertile land is relatively limited thus in turn causing pressure on this expanding population (Young 2003). Young has further suggested that this factor, combined with the need to move herds away from an area with potentially severe winters, may have initiated seasonal movements down into the Vale of Peshawar, although perhaps first in a limited form, thus explaining the first occupation of the Bala Hisar of Charsadda (Young 2003: 73).

However, this initial expansion within the Swat Valley and exploitation of the Vale of Peshawar is followed by a dramatic expansion of settlement between c. 1400 and the first centuries of the first millennium BC (Swat Period V) as characterised by the growth of larger settlement sites at Bir-kot-ghwandai, Balambat, Damkot, Aligrama and Charsadda and the spread of cemetery sites within the northern valleys and the Vale of Peshawar. It is tempting to consider the spread of these very visible cemeteries as a response to population pressure on limited resources as already hinted by Stacul (1987: 68–69, 121), although this is not proven. It is precisely at this point that the settlement at the Bala Hisar of Charsadda expands and consolidates, although it still demonstrates its close links with the valleys through finds of an anthropomorphic figure (Section 8.2.2.1), biconical beads (Section 12.4.1) and vessels of Burnished Red Ware (Section 8.2.1) and Black/Grey Burnished Ware (Section 8.2.2) (Figure 17.2). However, even at this stage it had already begun to differentiate its subsistence pattern from those settlements of the northern valleys, with a more restricted repertoire (Chapters 15 & 16) (Young 2003). This regional unity is then broken by the appearance of a new ceramic assemblage within the region, an assemblage characterised by Vogelsang as 'Indic' (1988; 1992). Vogelsang was not the first scholar to recognise this link with the Gangetic region, as Wheeler before him was struck by the similarity of certain ceramic vessels with those from levels associated with Painted Grey Ware at the Gangetic site of Hastinapura (Wheeler 1962: 40). Largely ignored by other scholars, Vogelsang formalised this observation by identifying an entire corpus of 'Indic' influence at Charsadda (1988; 1995). Our fresh data from the Bala Hisar of Charsadda certainly supports the early appearance of such an 'Indic' corpus but dates it slightly earlier to the first millennium BC (Chapter 7) (Figure 17.3). Its appearance is, however, limited to the larger settlements of the Vale of Peshawar and its northern valleys (Bir-kot-ghwandai, Balambat, Aligrama and Charsadda), whilst contemporary cemetery sites and smaller settlements within the northern valleys appear to stress a very clear resistance (Vogelsang 1988). Whether this feature is a reflection of a division of communities into urban or non-urban is unclear but its archaeological manifestation is striking – what was once core becomes periphery and what was once periphery becomes core –

and the valleys do not reassert their integration until the spread of Buddhism during the Kushana epoch.

17.5 CONCLUSION

The new evidence from the Bala Hisar of Charsadda has enabled us to abandon diffusionistic explanations for the emergence of urban forms in the north-west and has led us away from a reliance on Persian colonisation as a catalyst. In its place, we are now able to present a much more dynamic and complex model with the incipient urban form of Charsadda having its origins as a peripheral settlement of a core development which was based within the northern valleys rather than down within the Vale of Peshwar. Perhaps originally initiated as a seasonal occupation site by transhumants from the valleys in the middle of the second millennium BC, the Bala Hisar consolidated its development with the construction of a communal ditch at the beginning of the first millennium BC. This development coincided with the appearance of a distinctive 'Indic' assemblage which Vogelsang has attributed to 'a growing influence from the east, namely from the rest of the Indian subcontinent' (1992: 251–252) and resulted in a differentiation between urban forms in the north-west and smaller settlement and cemetery sites, with the latter becoming peripheral. The antiquity of this relationship between the north-west and the Gangetic plains seriously questions attempts by archaeologists (Allchin 1989; 1990; 1995) to formally differentiate the urban development of the northern parts of South Asia into a north-western and a Gangetic sphere of influence.

Indeed, attempts to trace Achaemenid and Macedonian linkages have overshadowed the evidence for the close and early relationship between Gandhara and the Ganges. For example, the opening comments of Sir John Marshall's chapter on the history of Taxila, relate that no lesser source than the *Ramayana* records the shared foundation of the ancient cities at Charsadda and Taxila (Marshall 1951: 11). The early Indian epic records that the cities of Pushkalavati and Takshasila were founded at the same time by King Bharata, as the seats for his two sons Pushkala and Taksha, close relations of Rama (*Ramayana* VIII.101.10–16). Taxila, or rather Takshasila, is also mentioned in the *Mahabharata*, when it records that the city was conquered by King Janamejaya of Hastinapura (*Mahabharata* Adiparva III.20). These early links are also traced by Dani, who comments on references to Gandhara, and its rulers, as contained within the *Puranas*, *Rig-Veda* and *Atharva-Veda* (Dani 1986: 40). Indeed, he also stresses the fact that the famous Sanskrit grammarian, Panini, was born within the Vale of Peshawar close to the Indus River crossing at Hund (Dani 1986: 43). Even after the broad expansion of the use of Kharoshthi at Taxila, accompanying the influence of the Persian empire, Dani wrote that the 'fact that the Indian Brahmi writing continued sporadically throughout the centuries on the coins and seals suggests that the Indian writing system was not a stranger here' (Dani 1986: 152).

A further element supporting this model of the integration of Gandhara into a broader South Asian perspective was also noted by Prakash, who commented on the presence of a series of eminent teachers and their schools at Taxila. According to the Pali texts, they attracted students from the Gangetic core, including the states and cities of Magadha, Rajagriha, Kasi, Kosala and Benares both during the Buddha's lifetime and before it (Prakash 1964: 140–142; Kosambi 1965). Gandhara was also firmly integrated within the sacred geographies of the Jains (Marshall 1951: 11) and Buddhists (Foucher 1915). Certainly Pushkalavati featured within the itinerary of Hiuen-Tsiang, the Chinese pilgrim who travelled in Gandhara in the 7th century AD and noted the presence of monasteries and stupas commemorating meritorious acts close to the city (Beal 1911: 64). Tucci also stresses the importance of Swat, in particular, as a centre for Mahayana and Vajrayana thought and teachings as late as the first half of the first millennium AD (Tucci 1963). To suggest such a close relationship between these two zones is not unreasonable, especially if one considers that the *uttarapatha*, or northern trade route, linked them, creating a broadly heterogeneous society (Kosambi 1965: 120).

Whilst refocusing on the strong linkages between these two key South Asian regions, it is also recognised that the junction of so many trade routes north, west, east and south will have enabled the flow of material, ideas and people through the Vale of Peshawar. One of the most surprising features of the analysis of the excavated material, however, is the almost entire absence of by-products of manufacturing processes, whether lapidary, shell, bone or ceramic with the exception of iron-working. Indeed, the function of the developing settlement at the Bala Hisar of Charsadda was certainly not one of a centre procuring, manufacturing and redistributing; quite different from the intensive manufacturing sequence found in the south of the subcontinent in contemporary levels at the Citadel of Anuradhapura (Coningham 2006) and within the emergent centre of Kausambi (Erdosy 1995). The presence of completed objects without evidence of by-products suggests that the Bala Hisar of Charsadda was a trading centre rather than a processing centre despite the wide range of inorganic resources and raw materials available locally and regionally (Chapter 2). This pattern is also echoed within the seed assemblage from Charsadda, where no crop processing remains have been recovered and although there may be a range of reasons for this as discussed in Section 15.4, it is possible that Charsadda was receiving processed crops as well as other resources from surrounding areas such as Swat and Dir. However, we are aware that only further investigations at the Bala Hisar will be able to answer such working hypotheses. Indeed, the scope for future work at Bala Hisar of Charsadda is enormous, whether within its early sequence or historic and medieval levels, although the damage to the archaeological resource from fresh excavations must be carefully considered bearing in mind that Wheeler's section led to the destruction of tens hundreds of cubic metres from the eastern side of the mound (Section 4.5.2). Equally promising would be an intensive survey of the site's hinterland, building on the pioneering work of Ihsan Ali (1994), in order to understand the relationship between the city and its rural and religious hinterland. From a regional perspec-

tive, much can now be done to scientifically compare the material from the lower levels at the Bala Hisar with contemporary material from the Swat and Dir valleys. For example, the use of thin-sections and ICP-MS analyses would enable us to identify the manufacturing centres of key ceramic wares and forms such as the Burnished Red Ware, Black/Grey Burnished wares and jar with rippled rim. From an inter-regional perspective, an intensive comparison of the late Bronze Age, Iron Age Early Historic sequences of the Vale of Peshawar and its northern valleys with those of the Vale of Kashmir and its valleys would also provide a better understanding of what appears to be a parallel, and most probably linked, development (Coningham & Manuel in press). Finally, we hope that the present volume demonstrates the potential of the widespread use of radiocarbon dating within the archaeology of Early Historic South Asia allowing us a discipline to abandon outdated diffusionistic models and to develop altogether more challenging alternative explanations.

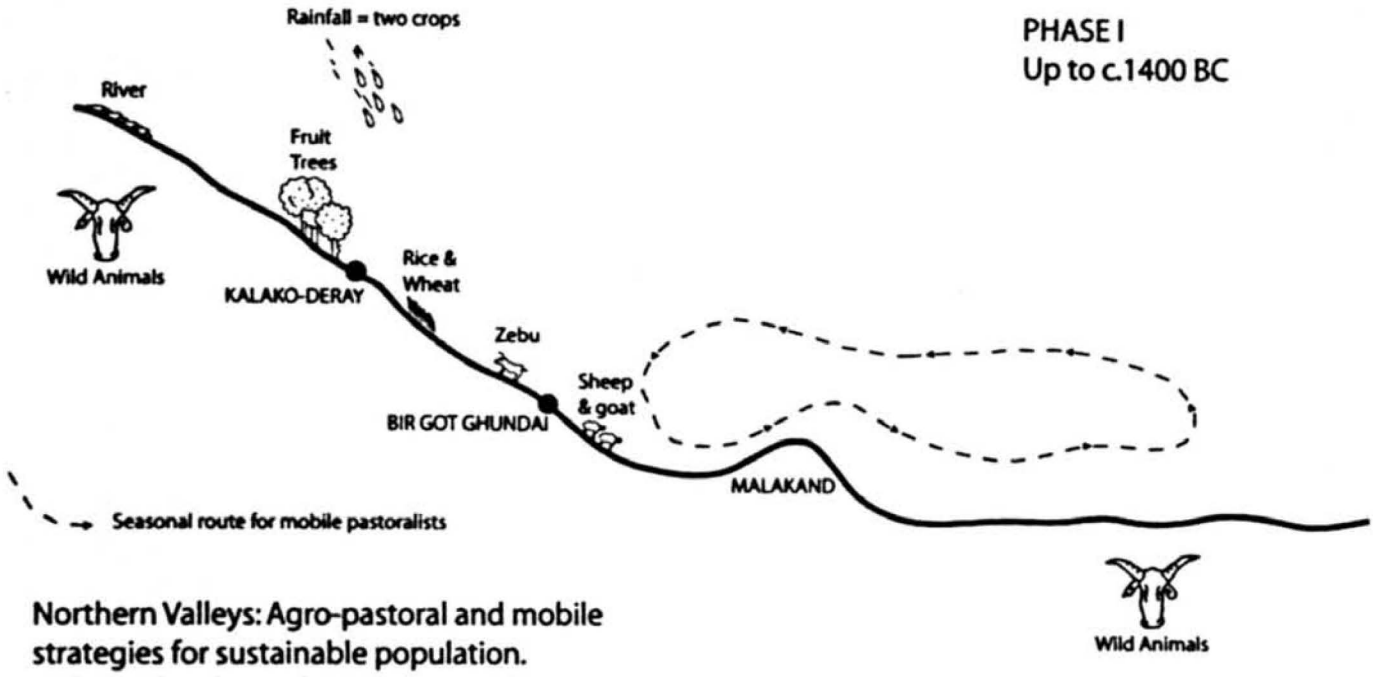


Figure 17.1: Schematic model for the development of Charsadda: Phase I

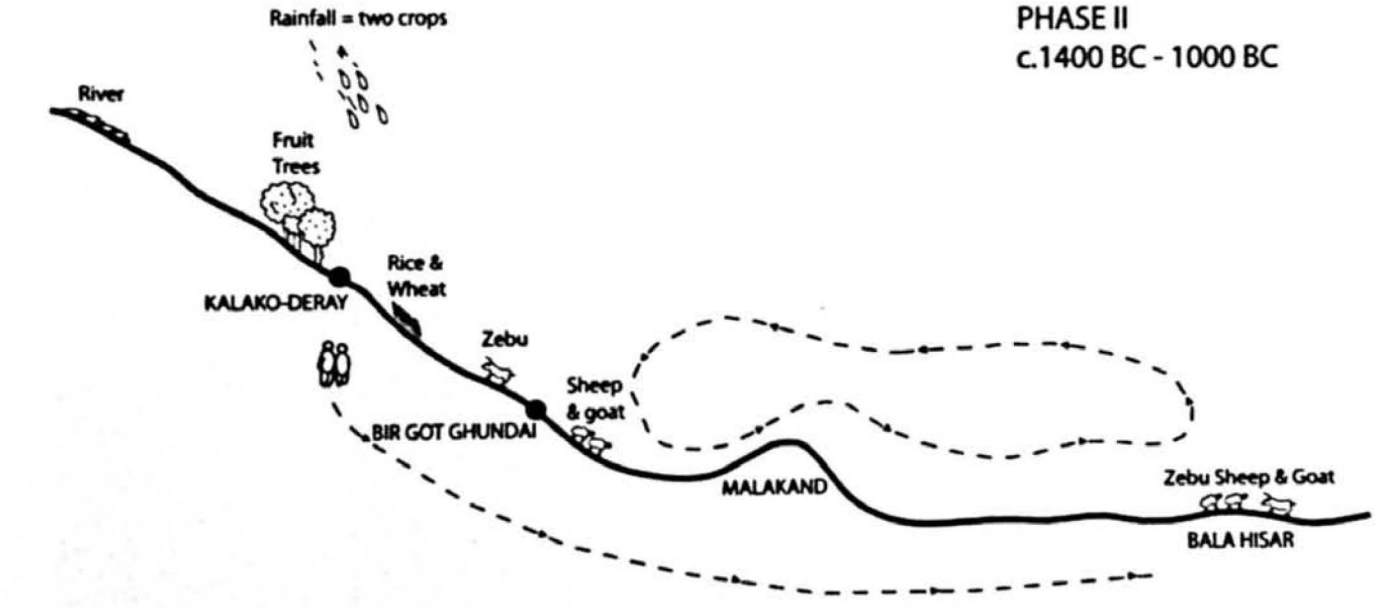


Figure 17.2: Schematic model for the development of Charsadda: Phase II

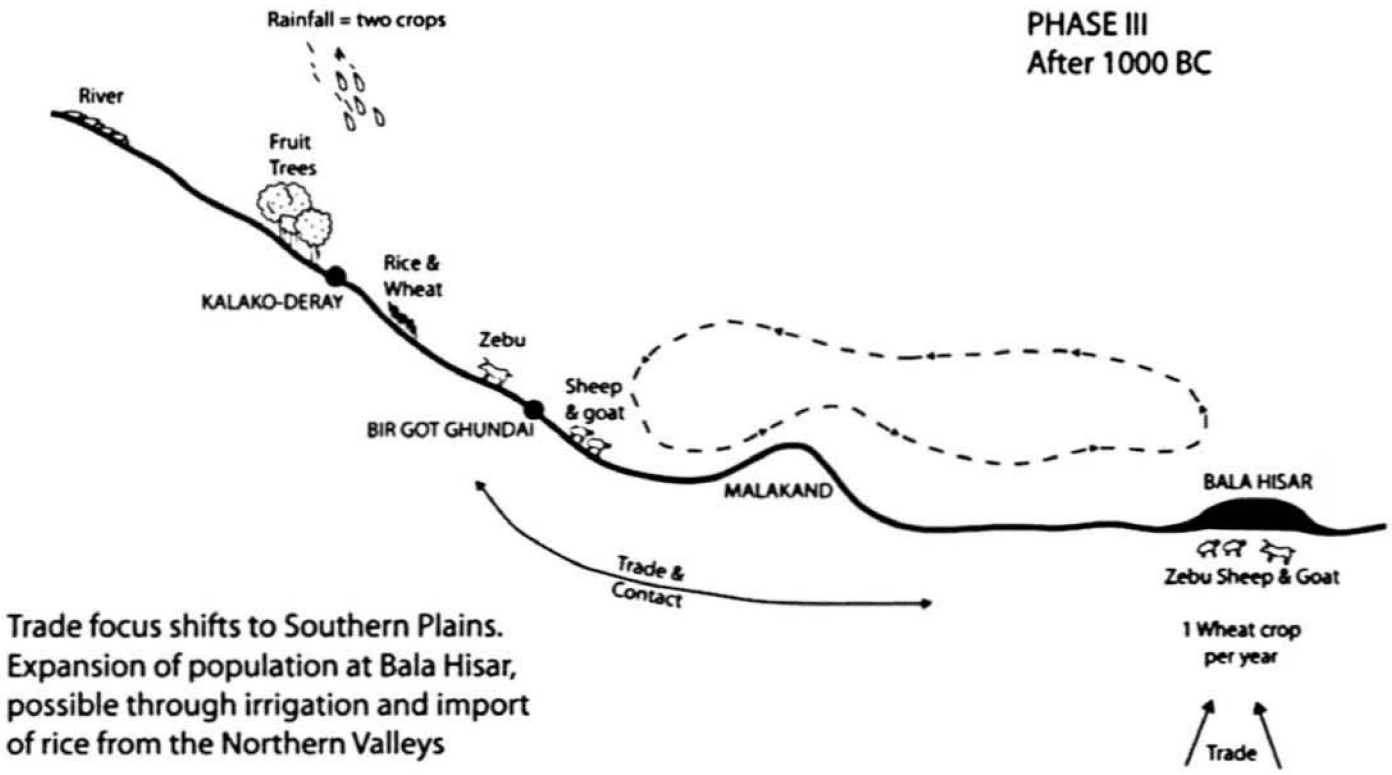


Figure 17.3: Schematic model for the development of Charsadda: Phase III

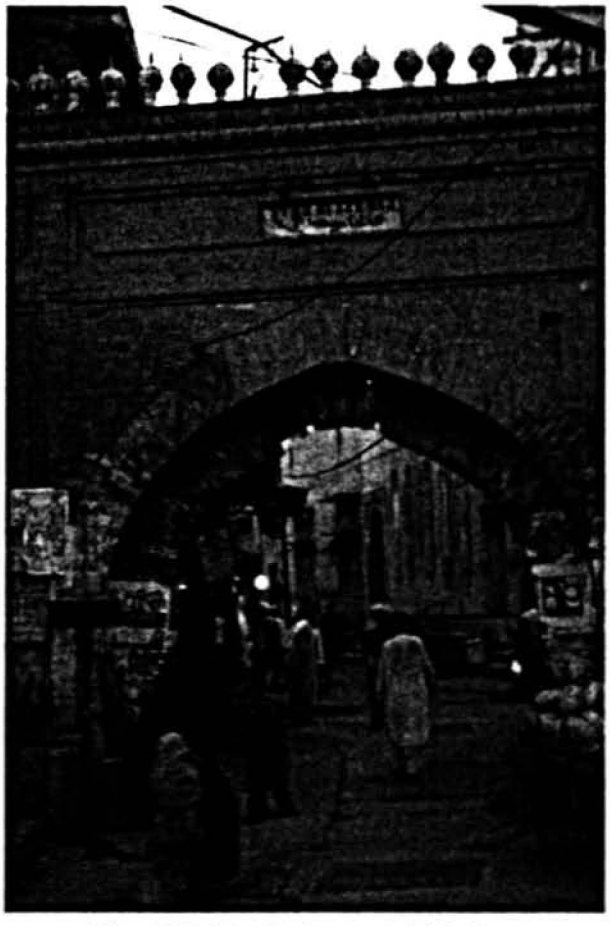


Plate 17.1: The Ganj gate of old Peshawar

Plate 17.2: General view across the Swat Valley

Plate 17.3: Detailed view of one of the pit burials at Timargarha in the Dir Valley

Plate 17.4: Transhumants moving their flocks down to the Vale of Peshawar for the winter

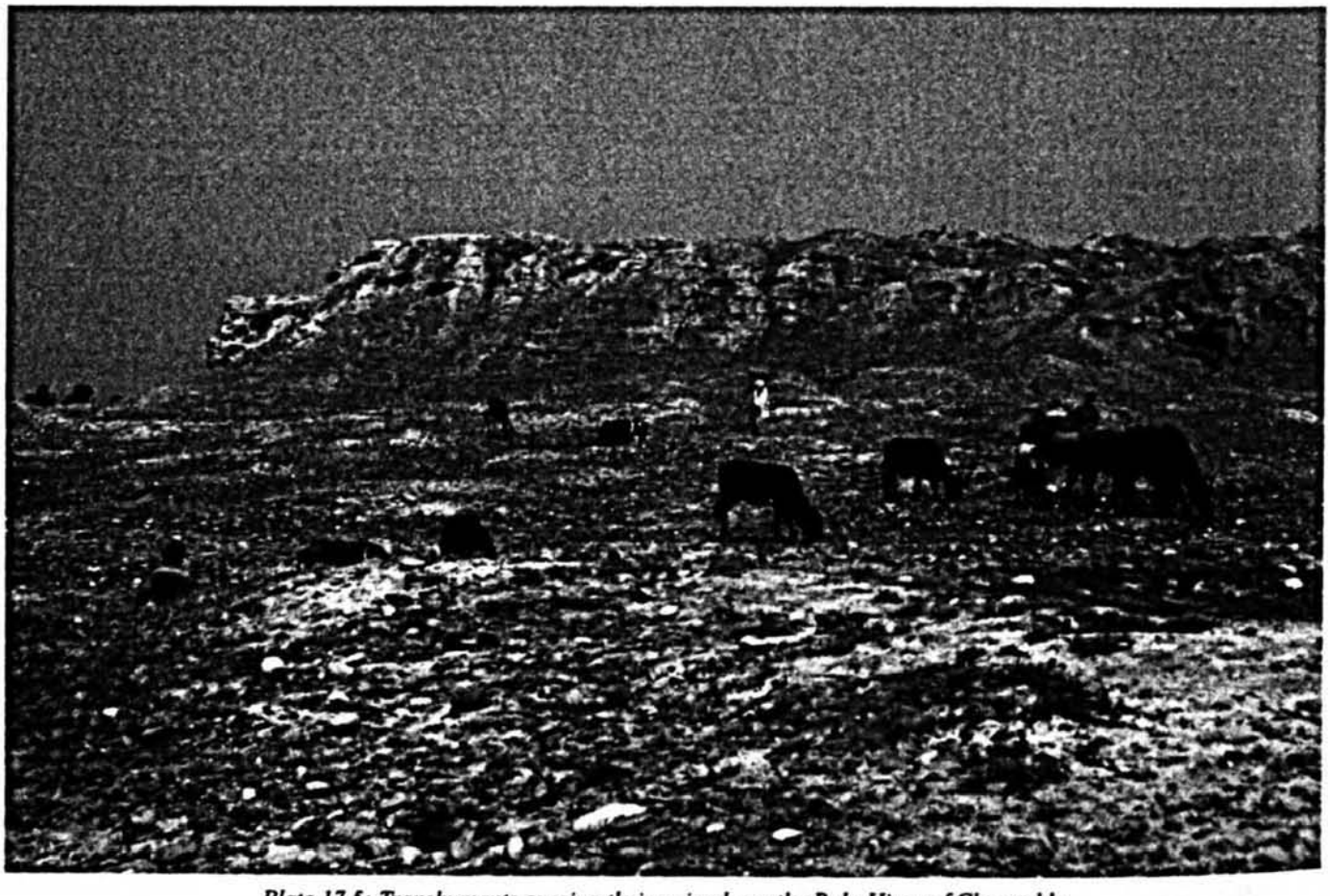


Plate 17.5: Transhumants grazing their animals on the Bala Hisar of Charsadda.

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APPENDIX 1

Trench	Context	Colour	Texture (%)	Size (m)	Depth (m)	Relationship	Interp.	Trench phase	Period
III	1	10yr 6/3	80c.20st		2.1	b13 a10	Wheeler's backfill	3.C	VI
III	2			3.75	2.1	b34 c3	ditch cut	3.A	III
III	3	2.5y 6/8	100c			3=1098	natural	natural	I
VI	4				0.01	a5	surface cleaning	6.D	VI
VI	5	10yr 5.4	70st.30c		0.03	b4 a6	old land surface	6.D	VI
VI	6	10yr 5.4	60st.40sd		0.3	b5 a8	fill of gully 8	6.D	VI
VI	7	10yr 5.6	30c.70st		0.4	b8 a37 a36 a46	old land surface	6.D	VI
VI	8			3	0.3	b6 c7	erosion gully	6.D	VI
III	9			1.1	0.2	b15 c16	robber pit	3.B	V
III	10	10yr 5/3	70st.30sd		0.2	10=11	fill of robber pit 9	3.B	V
III	11	10yr 5/3	70st.30sd		0.46	b1 a12	fill of robber pit 9	3.B	V
III	12	10yr 5.3	70c.30st		0.18	b11 a15	fill of robber pit 9	3.B	V
III	13			0.2	1.4	b14 c1	auger hole	3.C	VI
III	14	10yr 6/3	80st.20sd		1.4	a13	fill of auger hole 13	3.C	VI
III	15	10yr 5.3	80st.20sd		0.36	b12 a9	fill of ditch 2	3.A	III
III	16	10yr 4.2	80c.20st		0.8	b9 a47	fill of ditch 2	3.A	III
III	17	10yr 4.4	100c		0.09	b47 a18	fill of ditch 2	3.A	III
III	18	10yr 5.2	80sd.20st		0.08	b17 a19	fill of ditch 2	3.A	III
III	19	10yr 5.4	80c.20st		0.14	b18 a20	fill of ditch 2	3.A	III
III	20	10yr 5.4	100st		0.06	b19 a21	fill of ditch 2	3.A	III
III	21	10yr 6.2	80c.20st		0.08	b20 a22	fill of ditch 2	3.A	III
III	22	10yr 5.4	80c.20st		0.1	b21 a23	fill of ditch 2	3.A	III
III	23	10yr 5.4	90st.10sd		0.09	b22 a24	fill of ditch 2	3.A	III
III	24	10yr 4.4	80st.20sd		0.08	b23 a25	fill of ditch 2	3.A	III
III	25	10yr 5.3	80c.20st		0.08	b24 a26	fill of ditch 2	3.A	III
III	26	10yr 5.4	80sd.20st		0.08	b25 a48	fill of ditch 2	3.A	III
III	27	10yr 5.4	70sd.30st		0.08	b48 a28	fill of ditch 2	3.A	III
III	28	10yr 5.2	80c.20st		0.08	b27 a29	fill of ditch 2	3.A	III
III	29	10yr 5.3	80c.20st		0.13	b28 a30	fill of ditch 2	3.A	III
III	30	10yr 5.4	70sd.30st		0.1	b29 a31	fill of ditch 2	3.A	III
III	31	10yr 5.2	60sd.40st		0.06	b30 a32	fill of ditch 2	3.A	III
III	32	10yr 4.3	60st.40sd		0.03	b33 a31	fill of ditch 2	3.A	III
III	33	10yr 4/4	70sd.30st		0.04	b34 a32	fill of ditch 2	3.A	III
III	34	10yr 6/2	70st.30sd		0.04	b33 a2	fill of ditch 2	3.A	III
VI	35	10yr 5.6	70st.30sd		0.75	b51 b49 a42	old land surface	6.C	V
VI	36	10yr 5.4	70st 30sd		0.3	b7 a49	fill of robber pit 49	6.C	V
VI	37	10yr 5.4	60st.40sd		0.2	b7 a50	fill of robber pit 50	6.C	V
VI	38	10yr 5.2	60st.40sd		0.25	b50 a64	old land surface	6.C	V
VI	39	10yr 6.3	80st.20sd		0.5	39=58	fill of robber pit 59	6.C	V
VI	40	10yr 5.6	70st.30sd		0.75	40=35	old land surface	6.C	V
VI	41	10yr 5.6	70st.30sd		0.75	50=35	old land surface	6.C	V
VI	42	10yr 5.3	75st.25sd		1	b35 a53	fill of robber pit 53	6.C	V
VI	43	10yr 5.3	70st.30sd		0.15	43=44	fill of robber pit 68	6.C	V
VI	44	10yr 5.3	70st.30sd		0.15	b53 a45	fill of robber pit 68	6.C	V
VI	45	10yr 5.6	60st.40c		0.25	b44 a68	fill of robber pit 68	6.C	V
VI	46	10yr 5.6	70st.30sd		0.25	b7 a52	fill of robber pit 51	6.C	V
III	47	10yr 4.6	80st.20sd		0.03	b16 a17	fill of ditch 2	3.A	III
III	48	10yr 4.6	90sd.10st		0.06	b26 a27	fill of ditch 2	3.A	III
VI	49			2.5	0.3	b36 c35	robber pit	6.C	V
VI	50			1.9	0.22	b37 c38	robber pit	6.C	V

Trench	Context	Colour	Texture (%)	Size (m)	Depth (m)	Relationship	Interp.	Trench phase	Period
VI	51			2.6	0.5	b52 c35	robber pit	6.C	V
VI	52	10yr 5.6	70st.30c		0.25	b51 a46	fill of robber pit 51	6.C	V
VI	53			2	1	b42 c44	robber pit	6.C	V
VI	54	10yr 6.3	80st.20sd		0.5	54=58	fill of robber pit 59	6.C	V
VI	55			4.25	2	b80 c63	ditch	6.B	III
VI	56	2.5y 6/8	100c			b61	natural	6.A	I
VI	57	10yr 4.3	70sd.30st		0.2	b.68 a60	fill of pit/ditch 61	6.A	II
VI	58	10yr 6.3	80st.20sd		0.5	b70 a59	fill of robber pit 59	6.C	V
VI	59			7	0.5	b58 c66	robber pit	6.C	V
VI	60	10yr 5.4	60sd.40st		0.6	b57 a61	fill of pit/ditch 61	6.A	II
VI	61			2.75	0.8	b60 c56	pit/ditch	6.A	II
VI	62	10yr 5.4	60sd.40st		0.6	62=60	fill of pit/ditch 61	6.A	II
VI	63	10yr 5.6	100c		0.65	63=71	wall melt	6.A	II
VI	64	10yr 6.3	80st.20sd		0.3	b38 a65	fill of robber pit 65	6.C	V
VI	65			4	0.7	b64 c63	robber pit	6.C	V
VI	66	10yr 6.4	100c		0.25	b59 a67	fill of ditch 55	6.B	III
VI	67	10yr 6.4	100c		0.15	b66 a72	fill of ditch 55	6.B	III
VI	68	10yr 4/3	70sd.30st	3.5	0.3	b45 c57	robber pit	6.C	V
VI	69	10yr 6.4	70st.30sd		0.55	b7 a70	fill of robber pit 70	6.C	V
VI	70			1.8	1	b69 c58	robber pit	6.C	V
VI	71	10yr 5.6	100c		0.65	b55 a147	wall melt	6.A	II
VI	72	70yr 5/4	80st.20sd		0.2	b73 a67	fill of ditch 55	6.B	III
VI	73	10yr 5.4	70st.30sd		0.2	b78 a72	fill of ditch 55	6.B	III
III	74	10yr 6/3	80c.20st		0.16	b1 a75	fill of posthole 75	3.A	III
III	75			0.29	0.16	b74 c3	posthole	3.A	III
III	76	10yr 6/3	80c.20st		0.19	b1 a77	fill of posthole 77	3.A	III
III	77			0.33	0.19	b76 c3	posthole	3.A	III
VI	78	10yr 5.6	70st.30sd		0.15	b79 a73	fill of ditch 55	6.B	III
VI	79	10yr 5.4	70st.30sd		0.15	b78 a80	fill of ditch 55	6.B	III
VI	80	10yr 5.4	70st.30sd		0.3	b79 a55	fill of ditch 55	6.B	III
III	81			0.34	0.2	b82 c3	posthole	3.A	III
III	82	10yr 6.3	80c.20st		0.2	82=1	fill of posthole 81	3.A	VI
III	83			0.23	0.14	b84 c3	posthole	3.A	III
III	84	10yr 6.3	80c.20st		0.14	84=1	fill of posthole 83	3.A	VI
III	85			0.34	0.2	b86 c3	posthole	3.A	III
III	86	10yr 6.3	80c.20st		0.2	86=1	fill of posthole 85	3.A	VI
III	87			0.23	0.19	b88 c3	posthole	3.A	III
III	88	10yr 6.3	80c.20st		0.19	88=1	fill of posthole 87	3.A	VI
III	89			0.37	0.25	b90 c3	posthole	3.A	III
III	90	10yr 6.3	80c.20st		0.25	90=1	fill of posthole 89	3.A	VI
III	91			0.28	0.04	b92 c3	posthole	3.A	III
III	92	10yr 6.3	80c.20st		0.04	92=1	fill of posthole 91	3.A	VI
III	93			0.18	0.12	b94 c3	posthole	3.A	III
III	94	10yr 6.3	80c.20st		0.12	94=1	fill of posthole 93	3.A	VI
III	95			0.33	0.12	b96 c3	posthole	3.A	III
III	96	10yr 6.3	80c.20st		0.12	96=1	fill of posthole 95	3.A	VI
III	97			0.26	0.15	b98 c3	posthole	3.A	III
III	98	10yr 6.3	80c.20st		0.15	198=1	fill of posthole 97	3.A	VI
III	99			0.25	0.09	b100 c3	posthole	3.A	III
III	100	10yr 5.6	75st.25sd		0.09	b1 a99	fill of posthole 99	3.A	III
III	101			0.23	0.47	b102 c3	posthole	3.A	III
III	102	10yr 5.6	75st.25sd		0.47	b1 a101	fill of posthole 101	3.A	III
III	103			0.12	0.09	b104 c3	posthole	3.A	III
III	104	10yr 6.6	80st.20sd		0.09	b1 a103	fill of posthole 103	3.A	III
III	105			0.12	0.09	b106 c3	posthole	3.A	III
III	106	10yr 6.6	80st.20sd		0.09	b1 a105	fill of posthole 105	3.A	III
III	107			0.11	0.1	b108 c3	posthole	3.A	III
III	108	10yr 6.6	80st.20sd		0.1	b1 a107	fill of posthole 107	3.A	III
III	109			0.11	0.12	b110 c3	posthole	3.A	III
III	110	10yr 6.6	80st.20sd		0.12	b1 a109	fill of posthole 109	3.A	III

Trench	Context	Colour	Texture (%)	Size (m)	Depth (m)	Relationship	Interp.	Trench phase	Period
III	111			0.18	0.09	b112 c3	posthole	3.A	III
III	112	10yr 6.6	80st.20sd		0.09	b1 a111	fill of posthole 111	3.A	III
III	113			0.17	0.07	b114 c3	posthole	3.A	III
III	114	2.5y 7.3	70c.30sd		0.07	b1 a113	fill of posthole 113	3.A	III
III	115			0.11	0.11	b116 c3	posthole	3.A	III
III	116	2.5y 6.6	70c.30sd		0.11	b1 a115	fill of posthole 115	3.A	III
III	117			0.2	0.11	b118 c3	posthole	3.A	III
III	118	2.5y 5.6	70c.30sd		0.11	b1 a117	fill of posthole 117	3.A	III
III	119			0.27	0.12	b120 c3	posthole	3.A	III
III	120	2.5y 5.6	70c.30sd		0.12	b1 a119	fill of posthole 119	3.A	III
III	121			0.4	0.13	b122 c3	posthole	3.A	III
III	122	10yr 6.3	80c.20st		0.13	122=1	fill of posthole 121	3.A	VI
III	123			0.33	0.3	b124 c3	posthole	3.A	III
III	124	10yr 6.3	80c.20st		0.3	124=1	fill of posthole 123	3.A	VI
III	125			0.25	0.15	b126 c3	posthole	3.A	III
III	126	2.5y 6.6	70c.30sd		0.15	b1 a125	fill of posthole 125	3.A	III
III	127			0.2	0.19	b128 c3	posthole	3.A	III
III	128	2.5y 5.4	80c.20st		0.19	b1 a127	fill of posthole 127	3.A	III
III	129			0.22	0.06	b130 c3	posthole	3.A	III
III	130	2.5y 6.6	70c.30sd		0.06	b1 a129	fill of posthole 129	3.A	III
III	131			0.24	0.09	b132 c3	posthole	3.A	III
III	132	2.5y 6.6	80c.20c		0.09	b1 a131	fill of posthole 131	3.A	III
III	133			0.2	0.23	b134 c3	posthole	3.A	III
III	134	2.5y 5.6	70c.30sd		0.23	b1 a133	fill of posthole 133	3.A	III
III	135			0.11	0.05	b136 c3	posthole	3.A	III
III	136	2.5y 6.6	70st.30sd		0.05	b1 a135	fill of posthole 135	3.A	III
III	137			0.11	0.08	b138 c3	posthole	3.A	III
III	138	2.5y 6.6	70st.30sd		0.08	b1 a137	fill of posthole 137	3.A	III
III	139			0.34	0.29	b140 c3	posthole	3.A	III
III	140	2.5y 5.6	70st.30sd		0.29	b1 a139	fill of posthole 139	3.A	III
III	141			0.34	0.37	b142 c3	posthole	3.A	III
III	142	2.5y 6.4	80c.20st		0.37	b1 a141	fill of poshole 141	3.A	III
III	143			0.33	0.3	b144 c3	posthole	3.A	III
III	144	2.5y 6.6	80sd.20st		0.3	b1 a143	fill of posthole 143	3.A	III
III	145			0.19	0.1	b146 c3	posthole	3.A	III
III	146	2.5y 6.6	70sd.30st		0.1	b1 a145	fill of posthole 145	3.A	III
VI	147	5y 6/6	100c			b71 a174	brick slab wall	6.A	II
III	148			0.25	0.18	b149 c3	posthole	3.A	III
III	149	2.5y 5.6	70st.30sd		0.18	b1 a148	fill of posthole 148	3.A	III
III	150			0.23	0.3	b151 c3	posthole	3.A	III
III	151	2.5y 5.6	70st.30sd		0.3	b1 a150	fill of posthole 150	3.A	III
III	152			0.38	0.15	b153 c3	posthole	3.A	III
III	153	2.5y 5.6	70st.30sd		0.15	b1 a152	fill of posthole 152	3.A	III
III	154			0.3	0.24	b155 c3	posthole	3.A	III
III	155	2.5y 5.6	70st.30sd		0.24	b1 a154	fill of posthole 154	3.A	III
III	156			0.12	0.1	b157 c3	posthole	3.A	III
III	157	2.5y 5.6	70st.30sd		0.1	b1 a156	fill of posthole 156	3.A	III
III	158			0.3	0.07	b159 c3	posthole	3.A	III
III	159	2.5y 5.6	70st.30sd		0.07	b1 a158	fill of posthole 158	3.A	III
III	160			0.21	0.11	b161 c3	posthole	3.A	III
III	161	2.5y 5.6	70st.30sd		0.11	b1 a160	fill of posthole 160	3.A	III
III	162			0.18	0.07	b163 c3	posthole	3.A	III
III	163	2.5y 5.6	70st.30sd		0.07	b1 a162	fill of posthole 162	3.A	III
III	164			0.17	0.08	b165 c3	posthole	3.A	III
III	165	2.5y 5.6	70st.30sd		0.08	b1 a164	fill of posthole 164	3.A	III
III	166			0.14	0.11	b167 c3	posthole	3.A	III
III	167	2.5y 5.6	70st.30sd		0.11	b1 a166	fill of posthole 166	3.A	III
III	168			0.13	0.15	b169 c3	posthole	3.A	III
III	169	2.5y 5.6	70st.30sd		0.15	b1 a168	fill of posthole 168	3.A	III
III	170			0.28	0.09	b171 c3	posthole	3.A	III
III	171	2.5y 5.6	70st.30sd		0.09	b1 a170	fill of posthole 170	3.A	III

Trench	Context	Colour	Texture (%)	Size (m)	Depth (m)	Relationship	Interp.	Trench phase	Period
III	172			0.3	0.06	b173 c3	posthole	3.A	III
III	173	2.5y 6.4	70st.30c		0.06	b1 a172	fill of posthole 172	3.A	III
VI	174			1.6	0.05	b147 c56	wall trench	6.A	II
III	175			0.16	0.1	b176 c3	posthole	3.A	III
III	176	10yr 6.3	80c.20st		0.1	176=1	fill of posthole 175	3.A	VI
III	177			0.25	0.1	b178 c3	posthole	3.A	III
III	178	2.5y 6.8	95c.5st		0.1	b1 a177	fill of posthole 177	3.A	III
III	179			0.26	0.06	b180 c3	posthole	3.A	III
III	180	10yr 6.3	80c.20st		0.06	180=1	fill of posthole 179	3.A	VI
III	181			0.38	0.13	b182 c3	posthole	3.A	III
III	182	10yr 6.3	80c.20st		0.13	182=1	fill of posthole 181	3.A	VI
III	183			0.21	0.03	b184 c3	posthole	3.A	III
III	184	10yr 6.3	80c.20st		0.03	184=1	fill of posthole 183	3.A	VI
VII	998	black	100charcoal			a999 b un excav	layer	7.A	IV
VII	999	5y 6/6	100c			b998 a un excav	brick slab wall	7.A	IV
VIII	1000	2.5y 4/3	40sd.60st			a1002	erosion	8.F	VI
VIII	1001	2.5y 5/2	40sd.60st			b1002 a1004	fill of robber pit 1024	8.E	V
VIII	1002	2.5y 5/4	40sd.60st			b1000 a1001	fill of robber pit 1024	8.E	V
VIII	1003	5y 5/2	60sd.40st			b1026.1015 a1011	fill of robber pit 1024	8.E	V
VIII	1004	5y 5/2	60sd.40st			b1001 a1005	fill of robber pit 1024	8.E	V
VIII	1005	5y 4/1	40sd 60st			b1004 a1053	fill of robber pit 1024	8.E	V
VIII	1006	5y 4/2	60sd.40st			b1057 a1026.1075	fill of robber pit 1024	8.E	V
VIII	1007	5y 4/2	60sd.40st			b1075 a1013	fill of robber pit 1024	8.E	V
VIII	1008	5y 6/1	60sd.40st			1008=1007	fill of robber pit 1024	8.E	V
VIII	1009	5y 5/1	60sd.40st			b1013 a1022	fill of robber pit 1024	8.E	V
VIII	1010	5y 5/2	40sd.60st			b1016.1018 a1017	fill of robber pit 1024	8.E	V
VIII	1011	5y 5/2	40sd.60st			b1003 a1016.1018	fill of robber pit 1024	8.E	V
VIII	1012	5y 5/2	60sd.40st			1012=1009	fill of robber pit 1024	8.E	V
VIII	1013	5y 6/2	40sd.60st			b1007 a1008	fill of robber pit 1024	8.E	V
VIII	1014	5y 6/1	40sd.60st			b1017 a1024	fill of robber pit 1024	8.E	V
VIII	1015	5y 4/4	70sd.60st			b1022 a1003.1023	fill of robber pit 1024	8.E	V
VIII	1016	5y 4/4	40sd.60st			b1011 a1010	fill of robber pit 1024	8.E	V
VIII	1017	5y 5/2	40sd.60st			b1010 a1029.1014	fill of robber pit 1024	8.E	V
VIII	1018	5y 4/2	60sd.40st			b1011 a1010	fill of robber pit 1024	8.E	V
VIII	1019	5.5y 4/4	80c/20s			1019=1010	fill of robber pit 1024	8.E	V
VIII	1020	2.5y 5/4	60sd.40st			1020=1017	fill of robber pit 1024	8.E	V
VIII	1021	2.5y 5/6	70c.30s		0.15	b1028 a1030	wall melt	8.D	II
VIII	1022	5y 5/4	40sd.60st			b1009 a1015	fill of robber pit 1024	8.E	V
VIII	1023	2.5y 5/4	60sd.40st			b1015 a1017.1099	fill of robber pit 1024	8.E	V
VIII	1024			10x10	3	b1001 c1104	robber pit	8.E	V
VIII	1025	10yr 6/2	40sd.60st			1025=1003	fill of robber pit 1024	8.E	V
VIII	1026	5y 6/2	60sd.40st			b1006 a1003	fill of robber pit 1024	8.E	V
VIII	1027	2.5y 5/3	40sd.60st			b1017 a1024	fill of robber pit 1024	8.E	V
VIII	1028	2.5y 5/3	60c.40st		0.75	b1105 a1021	old land surf	8.D	II
VIII	1029	2.5y 5/3	60c.40st			b1017 a1024	fill of robber pit 1024	8.E	V
VIII	1030	100 cobbles		1.8x0.4	0.2	b1021 f1100	cobble wall	8.D	II
VIII	1031	5y 5/3	100st		0.5	b1100 a1039	old land surf/levelling	8.D	II
VIII	1032	60c.40ch				1032=1021	charcoal lense	8.D	II
VIII	1033	5y 6/1	80brick.20c			1033=1031	old land surf/levelling	8.D	II
VIII	1034	5y 5/1	20sd.80st			1034=1021	sandy-silt lense	8.D	II
IX	1035	2.5y 4/3	40sd.60st			1035=1000	erosion	8.F	VI
VIII	1036	5y 6/1	40sd.60st			b1000 f1024	within wall 1030	8.D	II
VIII	1037	5y 6/1	80c.20st			1037=1021	clay lense	8.D	II
VIII	1038	2.5y 5/4	60sd.40st			1038=1020	fill of robber pit 1024	8.E	V
VIII	1039	7.5yr 6/0	100plaster			b1031 a1047	plaster floor	8.C	II
VIII	1040	10yr 6/3	100st			b1021 a1041	fill of pit 1041	8.D	II
VIII	1041					b1040 c1031	pit	8.D	II
VIII	1042					b1050 c1031	pit	8.D	II
VIII	1043	10yr 5/6	100st			b1021 a1050	fill of pit 1042	8.D	II
VIII	1044					b1045 c1052	oven	8.C	II
VIII	1045	10yr 8/1	80ash.20char			b1039 a1044	fill of oven 1044	8.C	II

Trench	Context	Colour	Texture (%)	Size (m)	Depth (m)	Relationship	Interp.	Trench phase	Period
IX	1046	2.5y 5/3	40sd.60st			b1035 a1048	fill of robber pit 1024	8.E	V
VIII	1047	10yr 6/2	100c			b1039 a1049	brick slab wall	8.C	II
IX	1048	2.5y 4/3	80st.20sd			b1046 a1053	fill of robber pit 1024	8.E	V
VIII	1049	10yr 7/2	100c			b1039 ∩101	brick slab wall	8.C	II
VIII	1050	2.5y 5/6	100st			b1043 a1042	fill of pit 1042	8.D	II
VIII	1051	10yr 6/3	80st.20sd			b1101 a1062	old land surf/levelling	8.C	II
VIII	1052	2.5y 6/6	80st.20sd			b1101 a1062	old land surf/levelling	8.C	II
IX	1053	5y 6/2	50c.50st			b1048 a1058	fill of robber pit 1024	8.E	V
VIII	1054	7.5yr 6/0	100c			b1060 ∩102	brick slab wall	8.C	II
VIII	1055	2.5y 5/6	80c.20st			b1102 a1074	old land surf/levelling	8.C	II
VIII	1056	2.5y 5/6	80c.20st			1056=1055	old land surf/levelling	8.C	II
IX	1057	10yr 5/1	50ash.50c			b1058 a1066	fill of robber pit 1024	8.E	V
IX	1058	5y 5/3	80c.20st			b1053 a1057	fill of robber pit 1024	8.E	V
VIII	1059	2.5y 6/6	100plaster			b1052 a1054	plaster floor	8.C	II
VIII	1060	2.5y 6/6	100plaster			1060=1059	plaster floor	8.C	II
VIII	1061					b1062 c1054	pit	8.C	II
VIII	1062	2.5y 5/3	60c.40st			b1052 a1061	fill of pit 1061	8.C	II
VIII	1063	2.5y 5/6	80c.20st			1063=1055	old land surf/levelling	8.C	II
VIII	1064	5y 7/1	80c.20st			b1074 a1071	old land surf/levelling	8.B	II
VIII	1065	5y 7/1	80c.20st			1065=1064	burnt loess	8.B	II
IX	1066	10yr 4/3	60st.40sd			b1057 a1067	fill of robber pit 1024	8.E	V
IX	1067	5y 4/2	60sd.40st			1067=1006	fill of robber pit 1024	8.E	V
VIII	1068					b1069 c1064	pit	8.E	V
VIII	1069	2.5y 7/4	100st			b1055 a1068	fill of pit 1068	8.B	II
VIII	1070			1	1	b1071 c1076	pit	8.B	II
VIII	1071	10yr 6/4	90cobb.20c			b1064 a1070	fill of pit 1070	8.B	II
IX	1072	2.5yr 5/3	60st.40sd			b1067 a1075	fill of robber pit 1024	8.E	V
VIII	1073	Black	100charcoal			b1055 a1065	fill of pit 1065	8.B	II
VIII	1074					b1073 c1064	pit	8.B	II
IX	1075	5y 4/2	60sd.40st			b1006 a1007	fill of robber pit 1024	8.E	V
VIII	1076	2.5y 6/6	80c.20st			b1070 a1091	old land surf	8.B	II
VIII	1077	5yr 4/1	100ash		0.2	b1092 a1082	old land surf	8.B	II
VIII	1078	10yr 5/4	80c.20st		0 9	b1083 a1094	old land surf	8.A	II
IX	1079		100 cobbles			b1075 a1080	fill of robber pit 1024	8.E	V
IX	1080	2.5y 4/3	60c.40st			b1079 a1090	fill of robber pit 1024	8.E	V
IX	1081	2.5y 4/3	60c.40st			1081=1080	fill of robber pit 1024	8.E	V
VIII	1082	2.5y 5/3	100ash			b1077 a1082	fill of oven 1082	8.A	II
VIII	1083					b1082 c1078	oven	8.A	II
VIII	1084	7.5yr 7/10	100ash			b1077 a1085	fill of posthole 1085	8.A	II
VIII	1085			0.08	0.06	b1084 c1078	posthole	8.A	II
VIII	1086	7.5yr 7/10	100ash			b1077 a1087	fill of posthole 1087	8.A	II
VIII	1087			0.14	0.06	b1086 c1078	posthole	8.A	II
VIII	1088	2.5y 4/4	100ash			b1077 a1089	fill of posthole 1089	8.A	II
VIII	1089			0.18	0.09	b1088 c1078	posthole	8.A	II
IX	1090	2.5y 5/4	60ash.40c			b1080 a1096	fill of robber pit 1024	8.E	V
VIII	1091	10yr 6/4	90cobb.20c			b1073 a1092	fill of pit 1092	8.B	II
VIII	1092			1	1	b1091 c1077	pit	8.B	II
IX	1093	2.5y 5/4	60ash.40c			1093=1090	fill of robber pit 1024	8.E	V
VIII	1094	2.5y 6/8	80c		0.25	b1078 a1097	old land surf	8.A	II
IX	1095	2.5y 5/4	60ash.40c			1095=1090	fill of robber pit 1024	9.E	V
VIII	1096	5y 6/6	100c			b1021 ∩103	brick slab wall	8.D	II
VIII	1097	2.5y 6/8	100c		0.25	b1094 a1098	natural	natural	I
VIII	1098	2.5y 6/8	100c			b1097 a1099	natural	natural	I
VIII	1099		100s			b1097 a1098	natural	natural	I
VIII	1100					b1030 c1031	wall trench	8.D	II
VIII	1101					b1049 c1052	wall trench	8.C	II
VIII	1102			0.6		b1054 c1055	wall trench	8.C	II
VIII	1103					b1096 c1031.1106	wall trench	8.D	II
VIII	1104		100cobbles			b1024 ∩105	cobble wall	8.D	II
VIII	1105					b1104 c1028	wall trench	8.D	II
IX	1106	2.5y 5/3	60c.40st			b1103 a unexc	old land surf	8.D	II

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