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Rescue Excavation at Pachamta, an Ahar Chalcolithic Site in Rajasthan: A New Understanding of Administration

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Abstract: *This paper presents the findings of rescue excavations conducted at Pachamta, one of three sites investigated as part of the Mewar Plain Archaeological Assessment (MPAA) in Rajasthan, India. Faced with imminent destruction due to developmental activities, Pachamta revealed a stratified occupation with a thin Early Historic layer overlying substantial remains of the Ahar Chalcolithic culture (c. 3200-1700 BCE). Excavations unearthed a parallel-walled structure or compartmented building, along with associated platforms and bins, exhibiting multiple construction phases roughly dated 2000-1900 BCE (Late Ahar Banas period). The ceramic assemblage is characteristic of the Ahar culture, featuring White Painted Black and Red Ware as a diagnostic type, alongside other wares and decorative techniques. Comparative analysis of the Pachamta structure with a similar, earlier (Middle Ahar Banas period) structure at Gilund, another Ahar site, suggests a potential shift in administrative power within the Mewar region during the later phases of the Chalcolithic period. This research contributes to understanding the socio-political dynamics of the Ahar Chalcolithic culture, highlighting the role of administration over time. The rescue excavation underscores the critical role of such projects in salvaging crucial archaeological data from sites threatened by modern development.*

Keywords*: Ahar Chalcolithic, Parallel-Walled Structure, Late Ahar Phase, Ceramic analysis, socio-political dynamics, Rescue excavations.*

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Introduction

Research across the Mewar Plain over the past few decades has shed much light on the Ahar Chalcolithic culture. However, many questions remain about the social, political, and economic lives of the people who once lived in that region. At the same time, many sites in this region of Mewar in Rajasthan face destruction mainly due to developmental activities such as the expansion of villages, houses, and the leveling of land for agricultural purposes. Because of this, the Mewar Plain Archaeological Assessment (MPAA) (Raczek *et al*. 2015) initiated a rescue archaeology project to excavate and salvage cultural material from three sites located near the centrally protected site of Gilund, viz., Chatrikhera (Raczek *et al*. 2011; Raczek *et al*. 2018; Shirvalkar *et al*. 2021; Sugandhi *et al*. 2010), Jawasiya-Arni (Raczek 2021), and Pachamta (Raczek *et al*. 2020; Shirvalkar *et al*. 2020) (Fig. 1). Our goal was to recover as much archaeological information as possible before the sites were lost and to address ongoing research questions. We also documented the continued destruction of sites across the region through repeated explorations and a site census (Sugandhi *et al*. 2015).

Two of the sites, Chatrikhera and Pachamta, are living sites where the modern village is located directly on the ancient mound. At Chatrikhera, the houses are constructed against the habitational deposit, and the archaeological deposit or a section of the mound itself acts as the back wall of the house or courtyard. Our excavations there produced evidence of the Ahar Chalcolithic and Early Historic period (Shirvalkar *et al*. 2021). The site of Jawasiya-Arni, a small site situated on a stabilised sand dune, is on the verge of extinction due to the villagers' sand mining activities. We recovered lithics, including microliths, from this site (Raczek 2021). Our most extensive excavations took place at Pachamta over two seasons in 2014-2016, as the site was in imminent danger of destruction due to development. The excavations were jointly led by JRN Rajasthan Vidyapeeth, Udaipur, Rajasthan, Deccan College Post-graduate and Research Institute, Pune, Maharashtra and Kennesaw State University, Georgia, USA.

Pachamta has five mounds (Fig. 2), each housing a temple dedicated to a different goddess, giving the village its name, Pachamta, which translates to five mounds of goddesses. The total area of the site including all 5 mounds, is approximately 20 hectares and has 5 meters of cultural deposit. A modern village is also present on the site. The site was first discovered by K.N. Puri (IAR 1957-58), who referred to the site as Pachimto. It was later reported by different scholars such as Dasgupta (2006), Hooja (1988) and Misra (1967) and the site is mentioned as Pachamta. The surface survey and material culture from the site led to the identification of the site as affiliated with the Ahar Chalcolithic culture. However, some Early Historic cultural material was also recovered from the surface. The current paper discusses the results of the rescue excavation carried out from 2014 to 2016. The excavation reaffirmed the presence of two distinct cultural periods, the Ahar Chalcolithic and Early Historic periods. The following section briefly reviews and provides background on the Ahar Chalcolithic and Early Historic periods.

Ahar Chalcolithic and Early Historic Periods

Ahar-Banas or Ahar Chalcolithic culture is mostly found in the region of Mewar, i.e. south-eastern Rajasthan. The surveys carried out in the region show that the culture mainly occupied the banks of rivers such as Banas, Kothari, Gambhiri, etc. and their tributaries. Excavations at various sites like Ahar (IAR 1954-55:14-15; IAR 1955-56:11; Sankalia *et al*. 1969), Balathal (Misra 1997; Misra 2005; Misra *et al*. 1995; Misra *et al*. 1997), Purani Marmi (Misra *et al*. 1993; Mohanty *et al*. 2000), Gilund (Shinde *et al*. 2014b), and Ojiyana (Meena & Tripathy 2000; 2001; 2001-02) have bracketed this culture between 3700 to 1800 BCE. The Ahar Chalcolithic has been subdivided into three phases viz. Early Chalcolithic Ahar dated to 3200-2600 BCE, Mature or Middle Ahar dated to 2500-2000 BCE

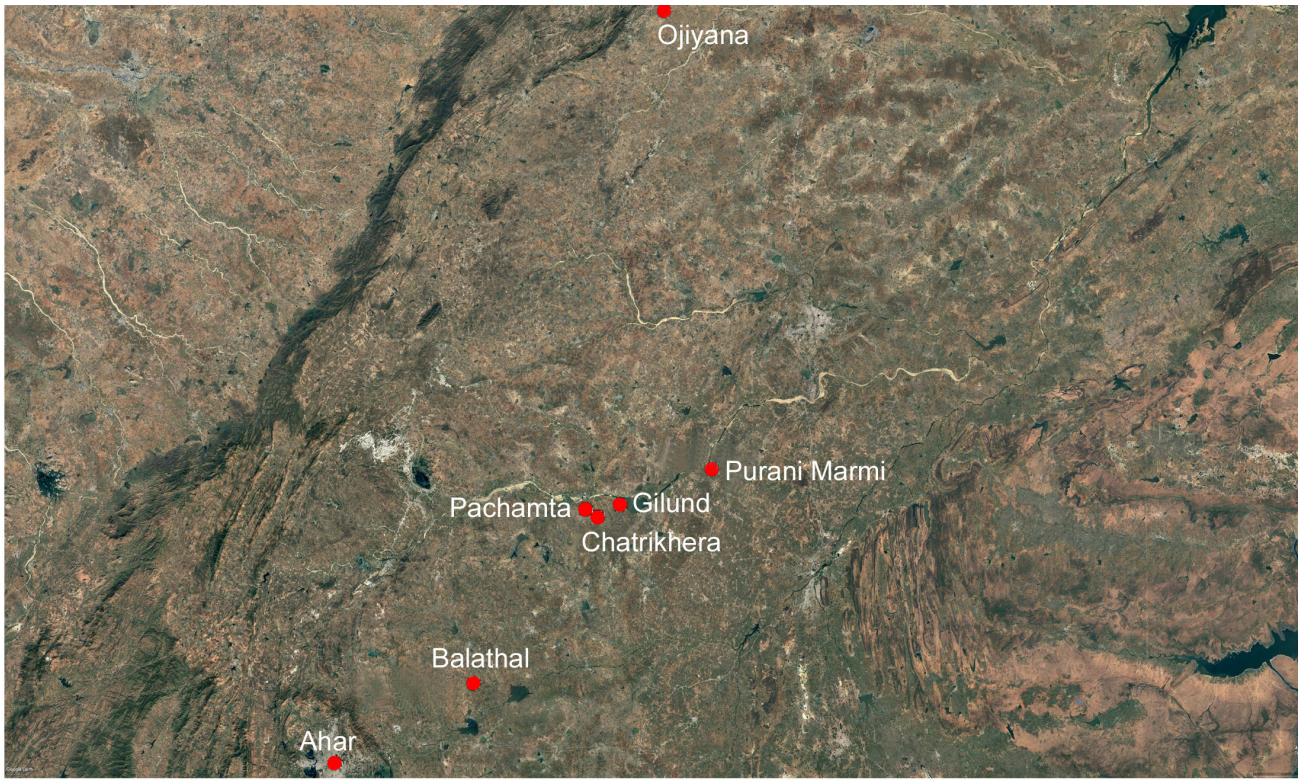

Fig. 1: Excavated Ahar Culture Sites, Courtesy Google Earth

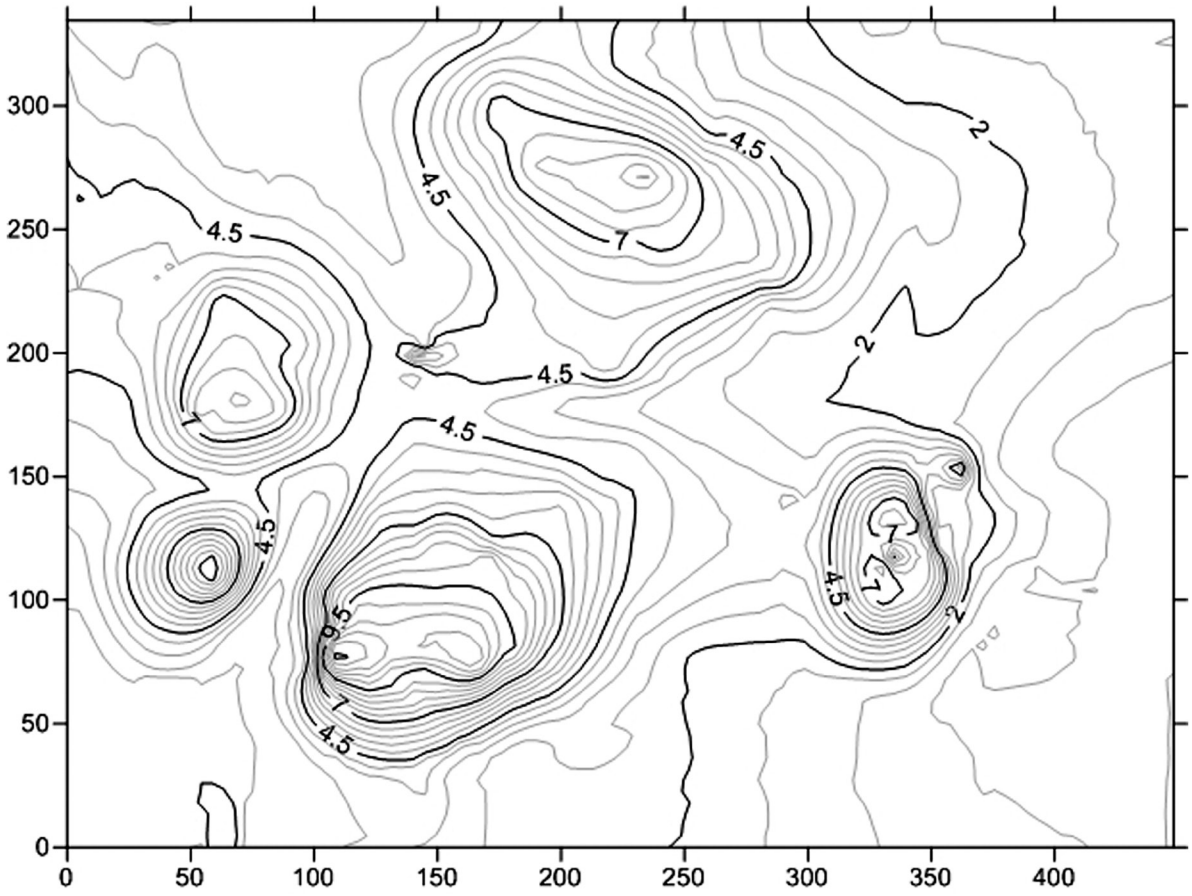

Fig. 2: Contour Map of Five Mounds at Pachamta

and Late Ahar dated to 1900-1700 BCE (Shinde & Possehl 2014). Excavations revealed insights into this culture's ceramics, architecture (both private and public), craft specialization, trade, and religious beliefs.

The Early Historic period in India coincides with the emergence of sixteen Mahajanpadas. During this phase in the Indian subcontinent, several regional Kingdoms and republic states emerged, such as Magadha, Lichhavi, Matsya, Chedi, Kosala, Kashi, Avanti, Anga, etc. (Dhavalikar 1999). The excavated sites in Rajasthan have provided a chronological sequence for the Early Historic period such as pre-Maurya, Mauryan, Sunga, and Rangmahal culture corresponding to the Late Kushana period (Hooja 2006). Some of the important excavated sites which helped in asserting the Early Historic period in Rajasthan are Rang Mahal (Rydh 1959), Bairat (IAR 1962-63:31; Sahni 1936), Sunari (IAR 1980-81:55-56), Noh (IAR 1963-64:34; IAR 1964-65:30; IAR 1965-66:38; IAR 1966-67:30), Gilund (Gullapalli & Johansen 2014; Shinde & Possehl 2014; Sinha-Deshpande 2014), Ahar (Deo 1969a; Deo 1969b), Nagari (Bhandarkar 1920; IAR 1962-63:19-20), Balathal (Dandekar 2012), and Iswal (Pandey *et al*. 2015).

The transition between the Ahar Chalcolithic and Early Historic periods is still poorly understood. In addition, the transition between the early, middle, and late phases of the Ahar Chalcolithic has rarely been addressed by previous researchers. Through our excavations, we have begun to identify some chronological shifts, particularly from the Middle to Late Ahar Chalcolithic period. We see these shifts in both the architecture and pottery, and we argue that the changes reflect social, economic, and political changes in the Mewar region.

Excavations at Pachamta

As the present village is located on top of the mounds (Fig.3), limited space was available for the excavation. We received permission to work on a small area of Mound I, the southeastern mound (Fig. 4). Although a large part of the mound had been destroyed to construct the village school and playground, much of it remained intact. In the first season of excavation, we excavated a total of three trenches at the top of the mound, measuring 5m x 5m in size. Out of these, two trenches were excavated as a step trench, from the top of the mound to the school playground, to reach the lower levels of the site. The step trench helped in understanding the chronological sequence of the site, i.e., the presence of Ahar Chalcolithic and Early Historic period.

However, in the succeeding season, the earlier area of excavation, i.e., the upper mound, could not be excavated as the local residents had begun to use that land. We then turned to the lower mound in the school playground area. This land was owned by the Government school, and with their support and assistance, we obtained permission to excavate in a limited area. We employed a horizontal method of excavation and set our trenches between swings, slides, and two rooms constructed for mid-day lunch cooking. In all, we excavated 11 trenches measuring 5m x 5m each (Fig. 5). Excavations over two seasons revealed a thin Early Historic layer atop the mound, and a deep deposit of Ahar Chalcolithic culture remains. The Early Historic period is devoid of any structural activity except for pits. However, excavations in the Chalcolithic period levels revealed a parallel-walled structure or a compartmented building (Raczek *et al*. 2020; Shirvalkar *et al*. 2020) (Fig. 6). The structure comprises 18 walls, with 12 oriented east-west and 6 running north-south. Excavations also revealed 10 bins within the parallel-walled structure, three modern-period kilns/chulhas, and one pit (Figs. 7 & 8). Analysis of mud brick shapes, materials, and mortar suggests three distinct wall and platform construction phases, followed by a fourth phase where bins and pits were added.

Fig. 3: Image of Pachamta Site, Courtesy Google Earth

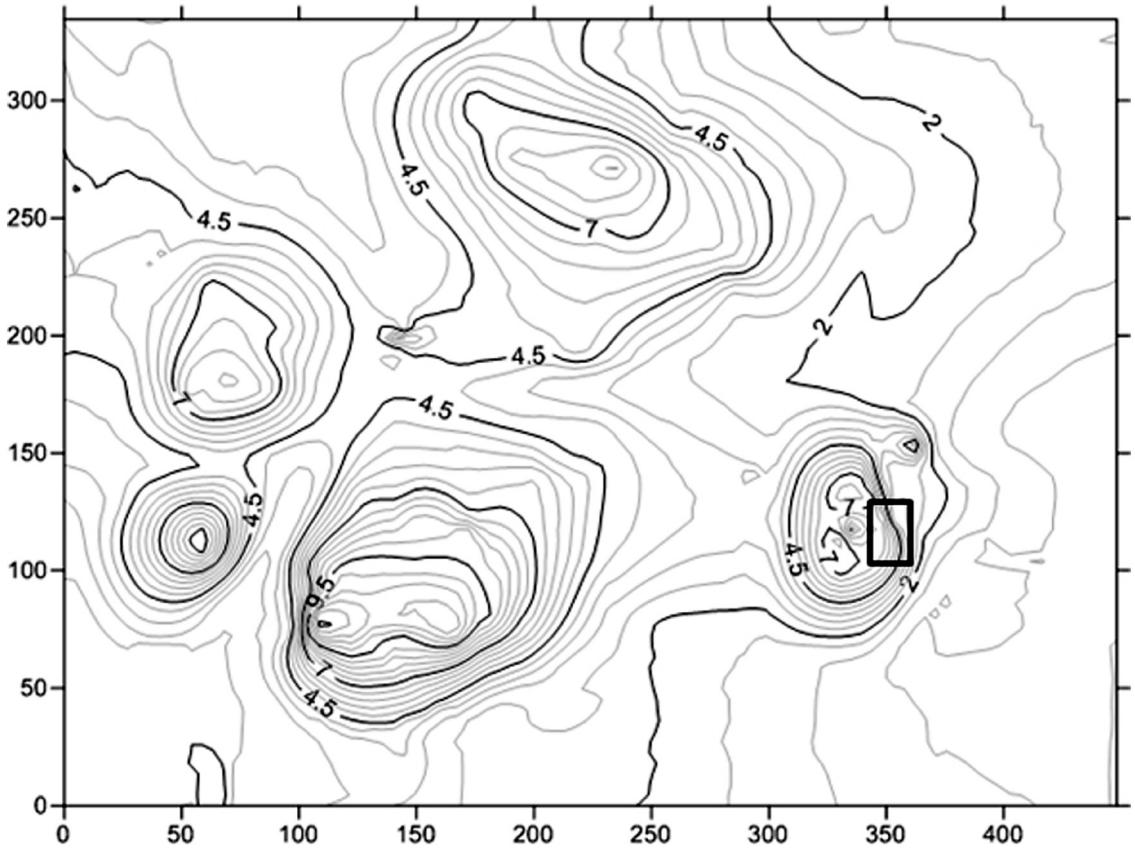

Fig. 4: Excavated Area at Pachamta

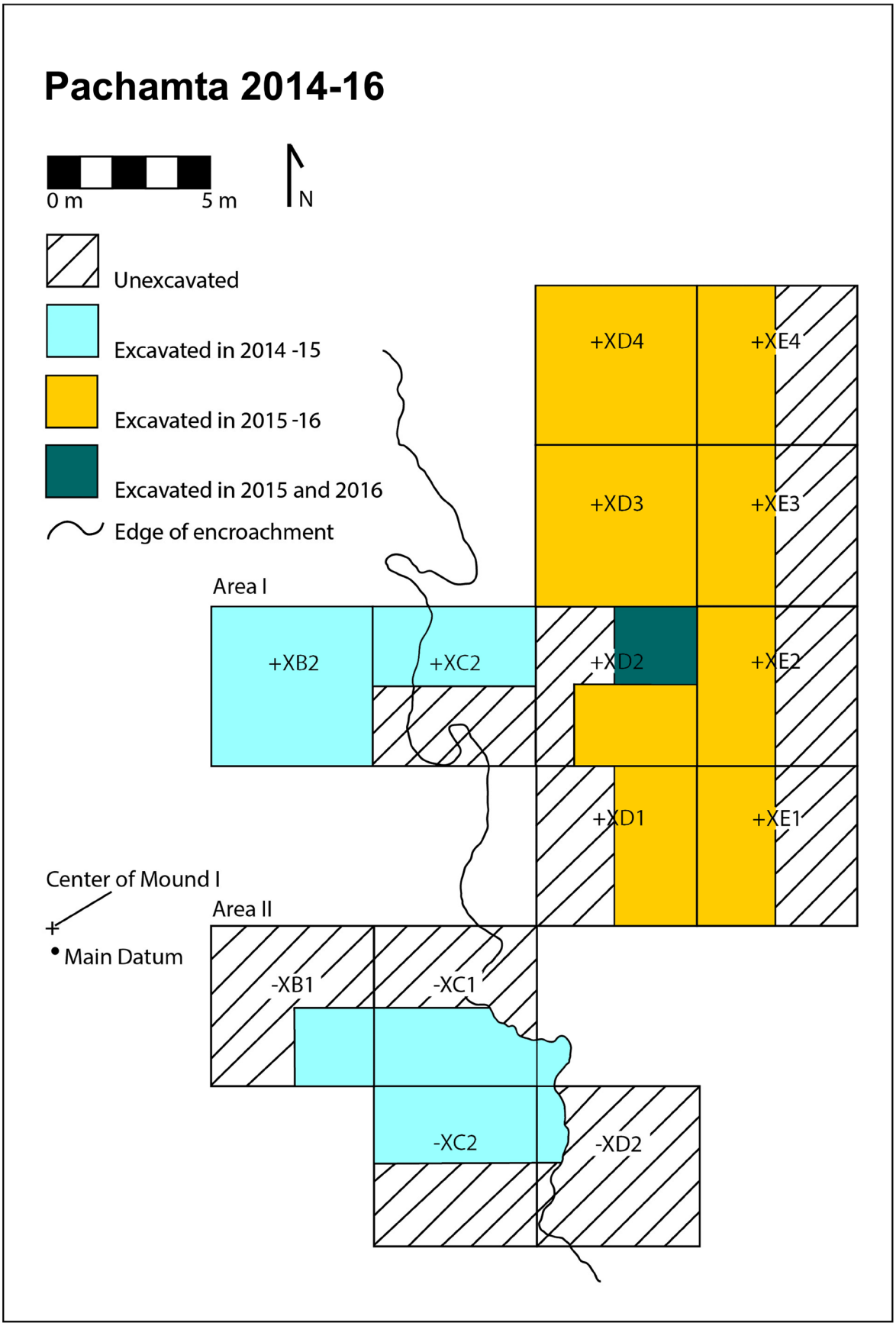

Fig. 5: Excavated Trenches at Pachamta 2014-2016

Fig. 6: Excavated Paralleled Wall Structure of Ahar Culture at Pachamta

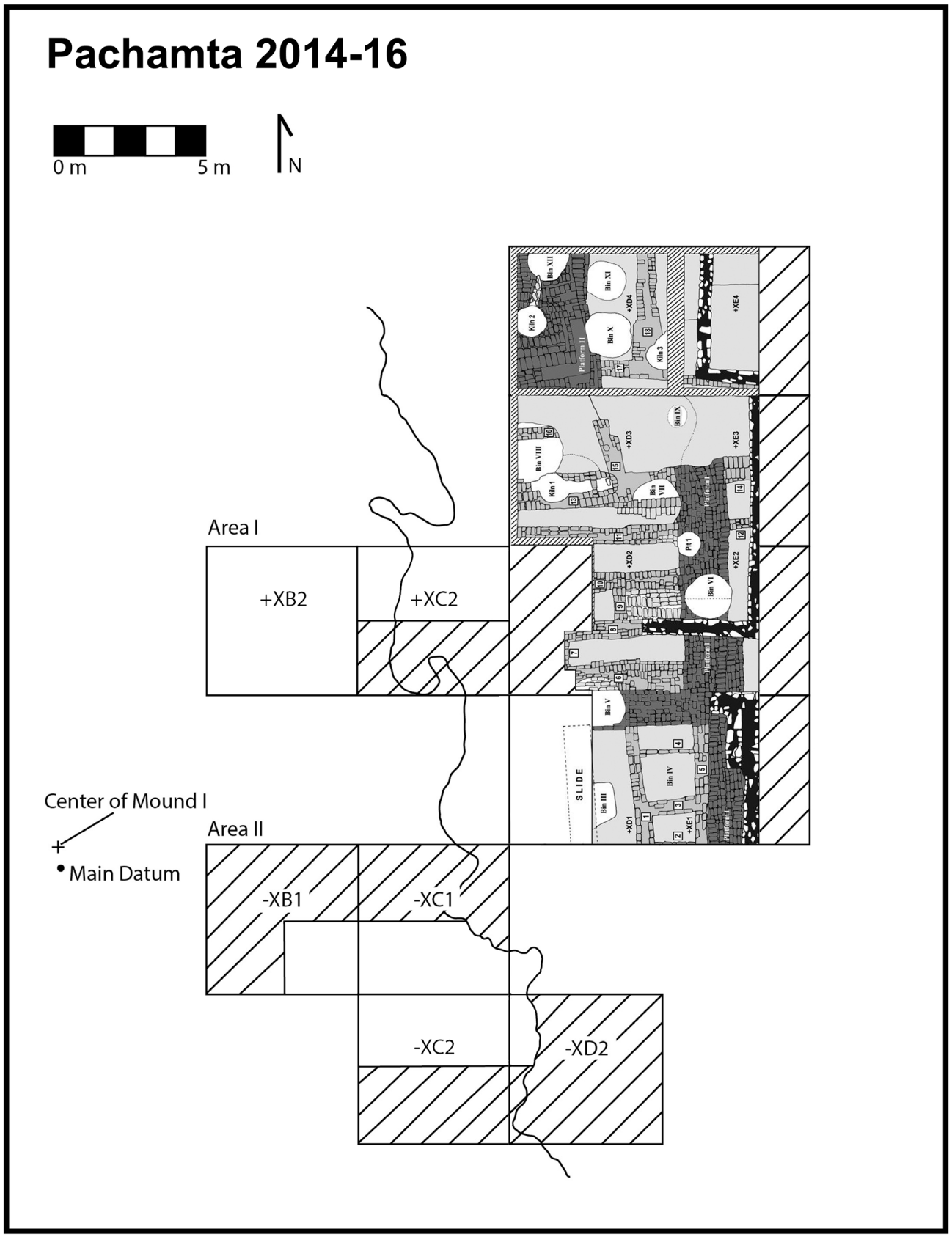

Fig. 7: Location of Parallel Walled Structure at Pachamta

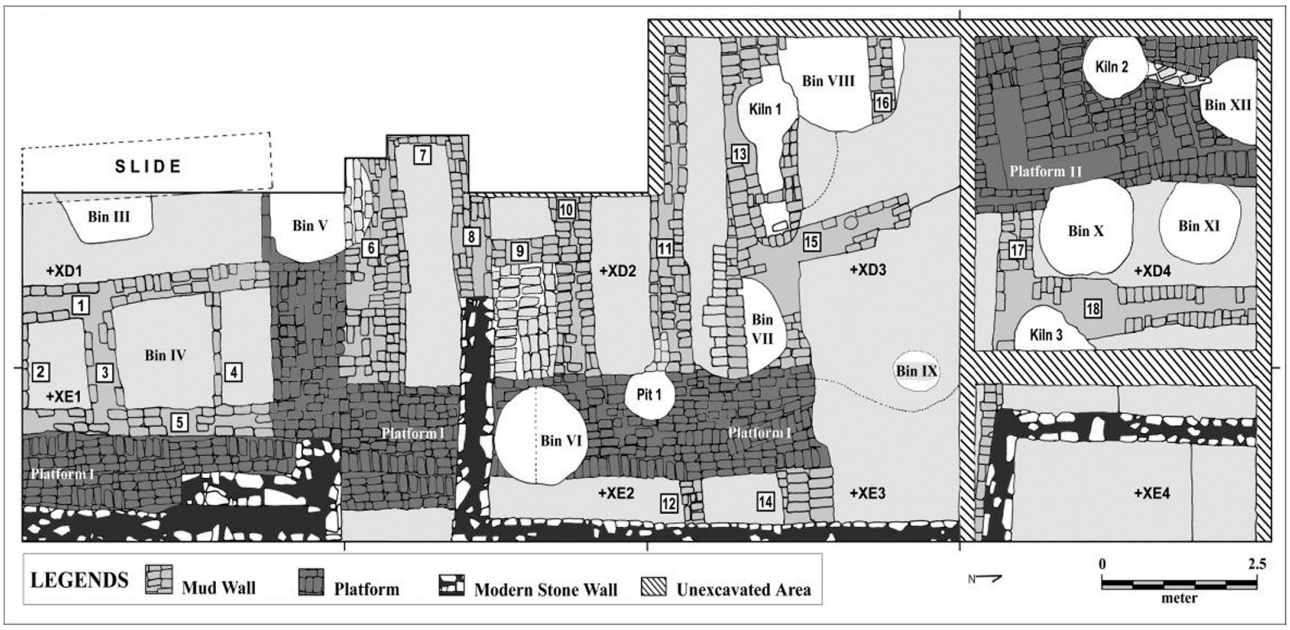

Fig. 8: Plan of Paralleled Wall Structure

Parallel-walled structure

Platforms

The excavation of the mud brick parallel-walled structure revealed two platforms, exhibiting three construction phases. Platform I, an 'L' shape, was built in two phases: Phase I utilized bricks ranging from 25×6 to 18×11 cm, bound by a yellow mortar layer of 3-4 cm thickness. Subsequently, Phase II extended Platform I southward.

Platform II, constructed in Phase III over ashy deposits, comprised five brick courses (18×14 to 34×14 cm) with whitish-yellowish mortar (1-4 cm). Interestingly, the use of mortar in the construction was not uniform, and in some areas, mortar was not used as a construction material. Later, during Phase IV, both platforms underwent significant changes due to the creation of bins and a modern kiln or chulha. These later features, including bin numbers V, VI, X, XI, and XII, were directly constructed over and through the platforms, damaging the original structures. The brick materials, characterized by a sandy texture and blackish-yellowish hues, remained consistent across the phases.

Walls

The excavation revealed 18 walls, categorized into three construction phases. During phase I, walls 6-16 were constructed, forming an early structural complex, often featuring reddish-brown bricks and thicker mortar. Wall 6 displayed a tapering form and was later impacted by Bin V. Walls 8 and 9, alongside other Phase I walls, creating an enclosed area.

Phase II introduced walls 1, 2, 4, 5, and a portion of 13, marked by interlocking wall junctions and a significant alteration to the existing structure specifically to Platform I. Walls 1 and 5 were constructed parallel to each other, both cutting into Platform I. Walls 2, 3 and 4 were constructed in an east-west direction, all three walls joining wall no 1 and 5 in an interlocking fashion. The interlocking junctions between these walls signify a deliberate architectural intent, suggesting planned modifications or expansions. Wall 13 was also modified during this phase, with a smaller wall added to its structure.

Phase III witnessed the construction of walls 3, 10, 17, and 18, characterized by coarser brickwork and a more haphazard construction style. Wall 10, in particular, displayed a two-phase construction, with the initial phase (Phase I) utilizing slanted bricks and the later extension in Phase III featuring roundish bricks. Wall 9 was dismantled during this phase, and wall 10 was extended, altering the original enclosure. Walls 6, 8, 9, 10, 11, and 13 formed an enclosure within Phase I. Walls varied significantly in size and construction: some featured mud plaster, others displayed distinct mortar types, and brick sizes ranged from small (14×7 cm) to large (35×14 cm).

Later disturbances, particularly bin construction and a modern kiln or chulha in Phase IV, significantly impacted several walls. These later features cut through and damaged the original wall structures, altering their dimensions. The stratigraphy of these walls provides a detailed sequence of construction and modification, reflecting the site's evolving use and occupation over time. The material composition, including the sandy-textured bricks and varying mortar consistencies, offers insight into the construction practices and available resources during each phase of the site's history. The changes in construction style and materials across the three phases likely reflect shifts in cultural practices, resource availability, or functional requirements.

Bins

During the excavation, a total of twelve bins were discovered. However, two of these, designated as Bin nos. 1 and 2, were located in the upper mound and are not related to the parallel-walled structure. Consequently, these two bins will not be detailed further in this description. The remaining ten bins were found to be associated with the parallel-walled structure and exhibited a consistent construction technique, featuring a thick plaster lining.

The construction of these ten bins demonstrably occurred in later phases of the site's occupation, specifically Phases III and IV. Evidence for this lies in the fact that the bins were built by cutting through existing walls, causing partial destruction to these earlier structures. Individual analysis reveals further details about their specific construction phases and relationships with other features. For instance, Bin no. 4 underwent enlargement between Phases III and IV, impacting different wall structures in each phase. Similarly, several bins (nos. 5, 6, 7, 8, 10, 11, and 12) were constructed in Phase IV, often cutting through earlier platforms or walls, indicating a sequence of building activities over time. Additionally, Bin no. 9 was established in an open area that was created during Phase II, and Pit no. 1 was also a Phase IV construction that cut through Platform I. One bin, Bin no. 3, remains unexcavated and is situated on the western side of wall no. 1.

Function and Dating

The presence of a similar parallel-walled structure at Gilund, an Ahar culture site near Pachamta, has further raised questions about the function of the building. Similar structures at Mohenjodaro and Harappa were first identified as granaries, as they resemble structures found at Roman sites in Britain that serve multiple purposes including a marketplace But this identification has been questioned by scholars (Fentress 1984). At Pachamta and Gilund, no evidence of grains have been recovered, so they are not thought to be granaries. The parallel-walled structure at Gilund has been identified as a warehouse or a magazine based on its structural style as well as seal impressions recovered from a bin in the structure. Ameri (2021) extensively analyzed the function of the Gilund structure, drawing comparisons with storage facilities and related discoveries across the Near East and South Asia. Notably, she highlights the Harappan "granary" as the closest architectural parallel to Gilund. However, she (2021) points out that neither site exhibits evidence of grain storage. Instead, based

on structural features and seal evidence, she proposes a 'seal-based administrative system' at Gilund. 'Gilund administrative sealing did not play a role in the local redistribution of materials, but was rather used only to guarantee products that could be moved from place to place (Ameri 2021:433). The designs on the impressions are similar to those of sites in Sindh and Baluchistan, Jhukar level of Chanhu Daro, Pirak Periods I and II, Kot Diji, Nindowari, and the Bactria-Margiana Archaeological Complex (BMAC) of Central Asia and northern Afghanistan. This suggests some connection with those regions. At Pachamta, we recovered levigated clay lumps in the bins between the parallel walls. We hypothesize that they may have been used for sealing, just as at Gilund, however, the preservation was not sufficient for us to confirm this function. We argue that the building was likely initially used for storage and concentration of goods as well as administration.

Dating the structures at both sites has proved challenging. At Pachamta, the structure was built in multiple phases, then bins and pits were added before it was eventually filled in with clean sand and built on top of. This is a clear sequence of occupation and modification, where subsequent activities later disrupted earlier constructions. The radiocarbon dating of the structure shows that it was likely built, modified, and abandoned within 150 years, and possibly in less time (Raczek *et al*. 2020). We base this conclusion on 13 charcoal samples that were collected from different layers and parts of the parallel-walled structure and dated by the Beta Analytic lab in Florida, USA. The results show that the parallel-walled structure has been secularly dated to roughly 2000 BCE to 1900 BCE, and it was abandoned before roughly 1700 BCE (Raczek *et al*. 2020). This places it in the later part of the Ahar Chalcolithic period.

Although no radiocarbon from the Gilund structure was analyzed, the excavators suggest that, "the structure was built in the beginning of the Middle Chalcolithic, around 2500 BC," based on pottery analysis (Shinde and Possehl 2014: 41). Ameri's comparative studies of the Gilund sealings from the structure with the sealings from Balathal, also date the building to the Middle Ahar Chalcolithic (Ameri 2019).

Ahar Culture Ceramics

The ceramics from the Ahar phase have been categorised into different wares on the basis of surface treatments. The Ahar Chalcolithic culture is characterized by White Painted Black and Red Ware, Black and Red Ware, and Reserve Slipped Ware. The White Painted Black and Red Ware and Black and Red Ware are characterised by the presence or absence of paintings, respectively. It is produced using the inverted firing technique. The pots are kept inverted in the kiln, which leads to the interior of the vessel and the top of the rim turning black due to the reducing conditions process, whereas the exterior remains red due to the oxidising process.

The White Painted Black and Red Ware, Black and Red Ware, Thin Red Ware, Red Slipped Ware, Gritty Red Slipped Ware, and Black on Red Ware have a red colour slip applied. The slip is present on the exterior and interior in the case of open vessels such as bowls and basins. In the case of closed vessels such as the globular pot, the slip has been applied on the exterior and up to the throat on the interior. Apart from these, the Tan Ware has a tan/brown or chocolate colour slip applied in a similar manner. The Black or Grey Ware has a black/ grey colour slip applied. In the absence of any surface treatment, it has been labeled as Red Untreated Ware.

White Painted Black and Red Ware

The white paint used for decorating the pot has a watery texture. The paint is not easily visible, making it difficult to understand the motifs made on the vessels. This ware is represented by forms such as

globular pots, convex-sided bowls, deep bowls and basins (Fig. 9). The texture or fabric ranges from medium-fine to coarse. The ware is mostly ill-fired, with a few specimens showing medium to well-firing. The ware was produced using a fast-wheel technique with both thick and thin sections being present within the assemblage.

The painted motifs are restricted to geometric designs. In most cases, the geometric designs are combined to create a complex motif. The design repertoire consists of horizontal lines, vertical lines, slanting lines, curvilinear bands, intersecting lines, zig zag lines, opposed slanting lines, horizontal and vertical wavy lines, triangle, diamond, chevron, chequered pattern, comb pattern, circular dots, elongated dots, 'V' shaped motif, inverted 'V' shaped motif, 'S' shaped motif, spiral and chain pattern. In some cases, the dots are placed in such a manner that it forms slanting lines, vertical lines, or a chequered pattern. The 'V' shaped motif or the opposed slanting lines are, in some cases, cut by a horizontal line (Fig. 9).

Plain Black and Red Ware

The Black and Red Ware is represented by forms such as globular pots, convex-sided bowls, slightly carinated bowls, basins, and dishes (Fig. 10). The texture or fabric ranges from medium-fine to coarse, with most of the sherds having a medium-coarse texture. The ware is mostly ill-fired, with a few specimens showing medium to well-firing. The ware was produced using a fast-wheel technique, with both thick and thin sections present within the assemblage.

Thin Red Ware

The Thin Red Ware is represented by forms such as globular pots and bowls (Fig. 11). The texture or fabric ranges from fine to medium fine. The ware is mostly medium-fired with a few specimens showing well to ill firing. The ware was produced using a fast wheel technique. The ware is mostly thin in section, with some sherds having a thick section.

Tan Ware

The Tan Ware is represented by forms such as globular pots and basins (Fig. 12). The texture or fabric ranges from coarse to medium-coarse, with a few specimens showing a medium-fine texture. The ware is mostly ill to medium-fired with a few specimens showing well-firing. The ware was produced using a fast-wheel technique. The ware is mostly thick in section, with a few sherds having thin sections.

Designs in the form of incisions, applique, and thumb impressions have been done. Incisions are mostly in the form of nail impressions. Applique design includes the application of a thin layer of clay on the pot in different forms. Within the Tan Ware, inverted loop and wavy design has been made in the form of applique designs (Fig. 12).

Reserve Slip Ware

The Reserve Slip Ware is also a characteristic of the Ahar culture. It is only represented by body sherds. The reserve slip ware is characterised by two distinct slips applied on the pot. A slip is first applied, and the pot is left to dry. When the slip dries off, the second slip is applied and is scooped out when the slip is still wet. The scooping process reveals the first slip beneath. Two different variations of the treatment were observed in the assemblage. The combinations are silver and black and black and red. Patterns made using the reserve slip technique are horizontal and circular designs (Fig. 13).

The texture or fabric ranges from coarse to medium-coarse. The ware is mostly well to medium-fired and was produced using a fast-wheel technique. Both thick and thin sections are present in the assemblage.

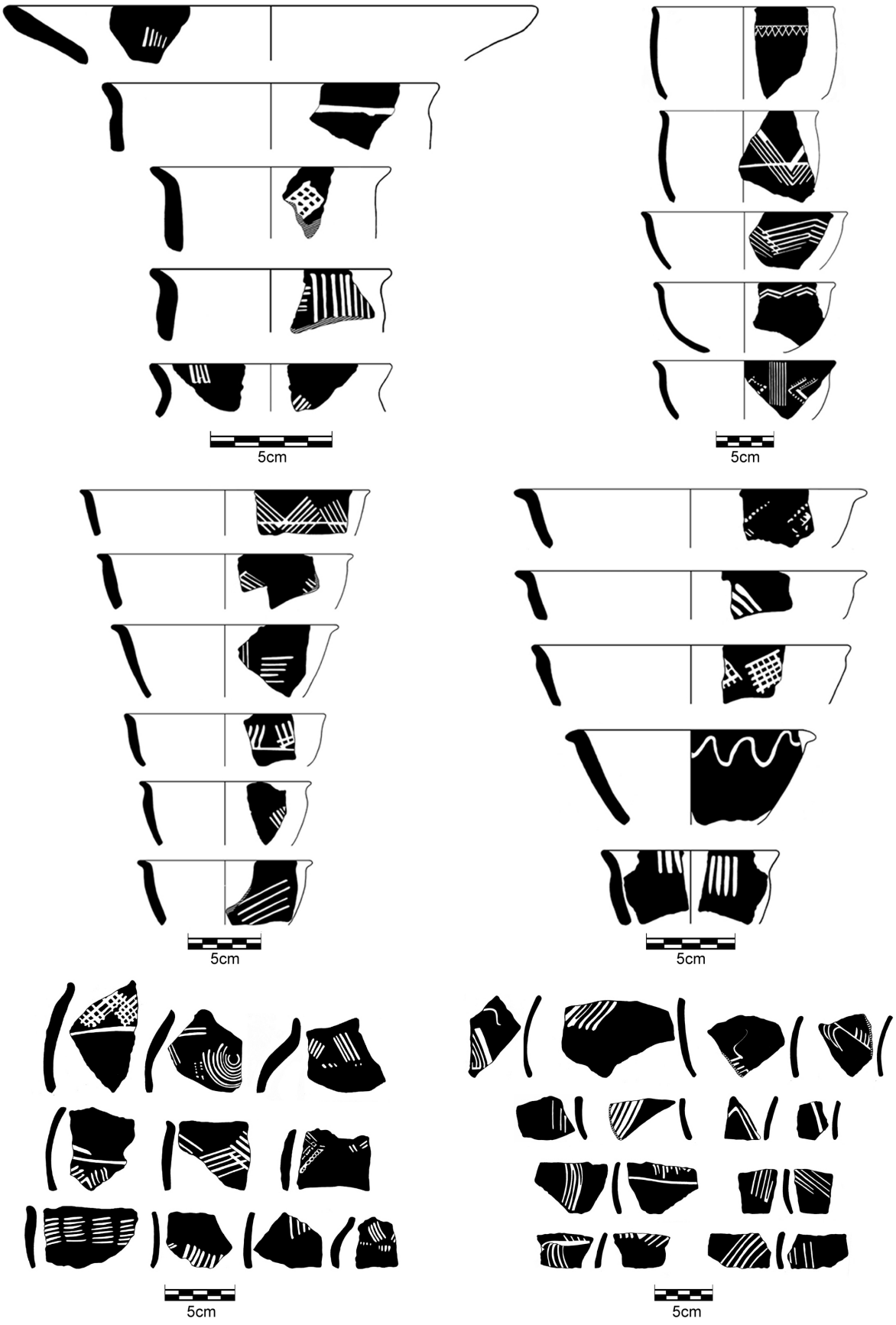

Fig. 9: White Painted Black and Red Ware of Ahar Culture

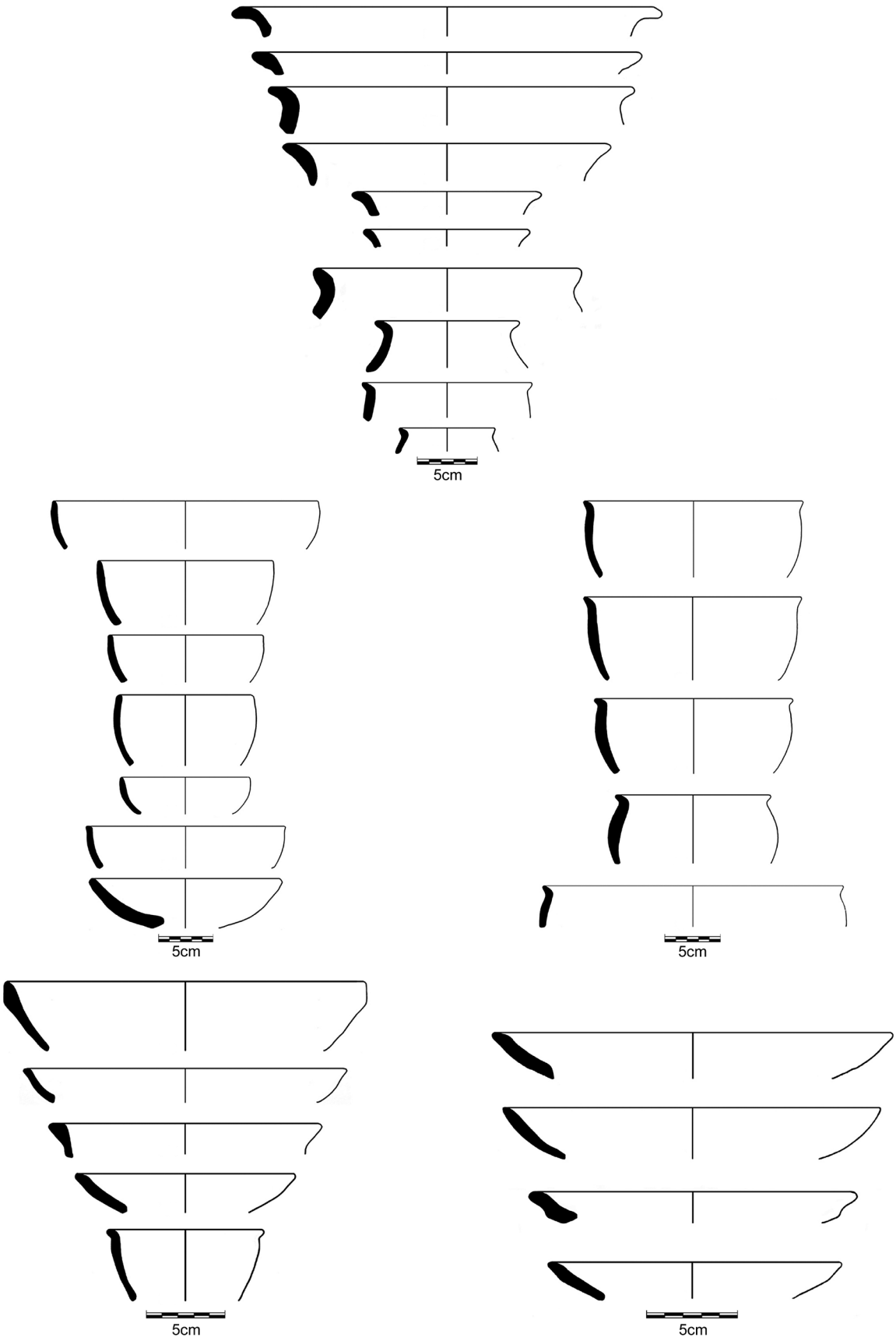

Fig. 10: Black and Red Ware of Ahar Culture

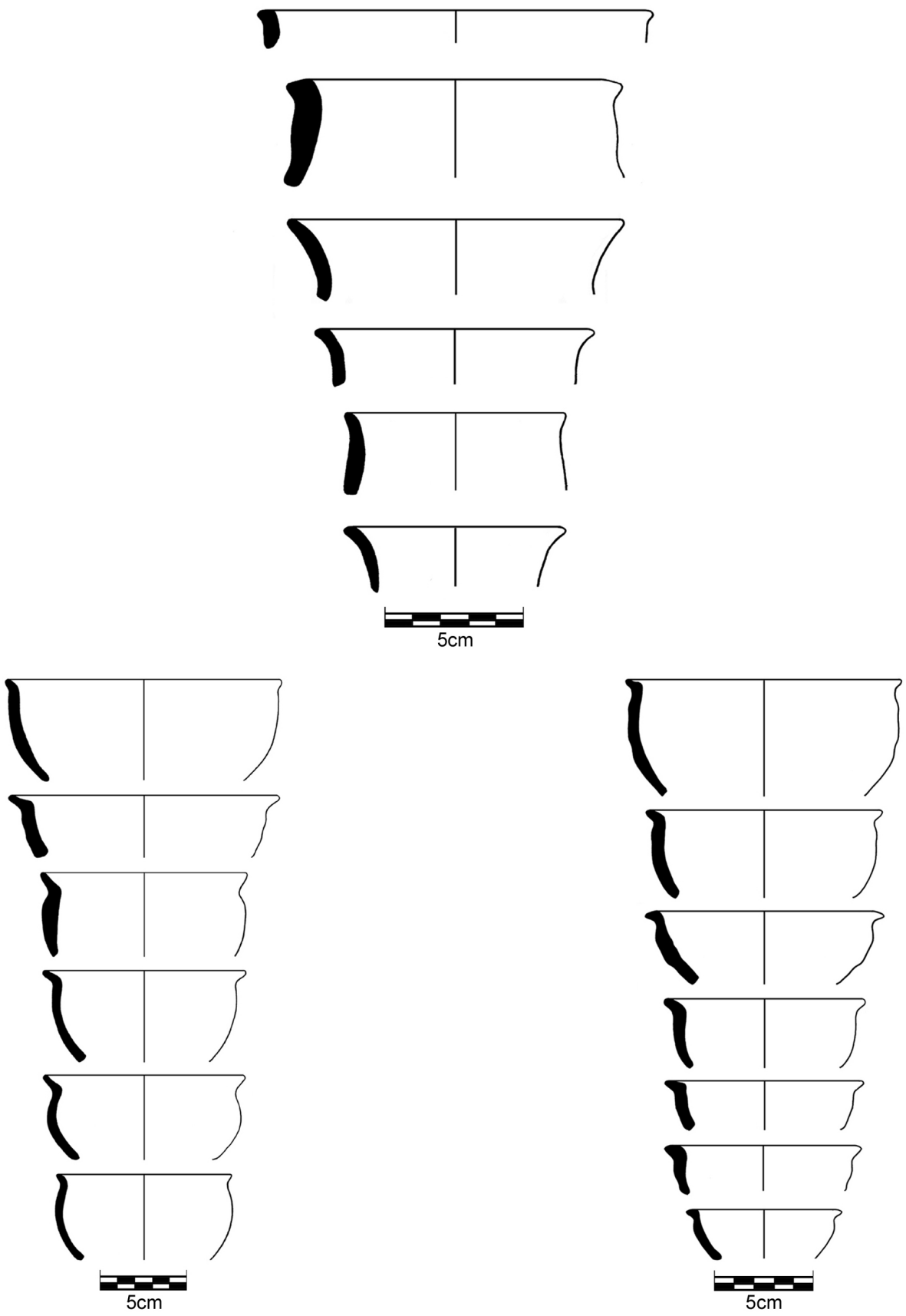

Fig. 11: Thin Red Ware of Ahar Culture

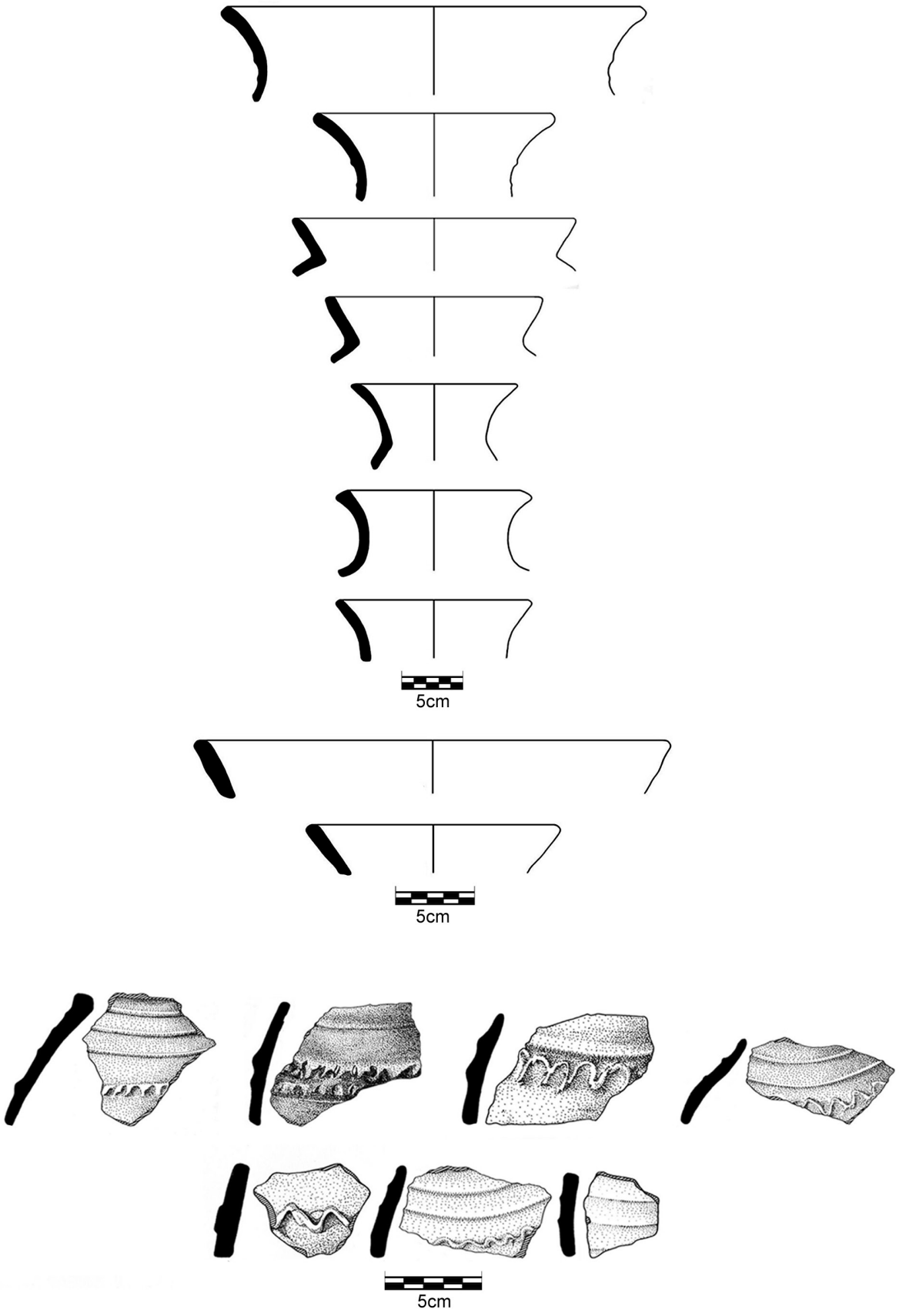

Fig. 12: Tan Ware of Ahar Culture

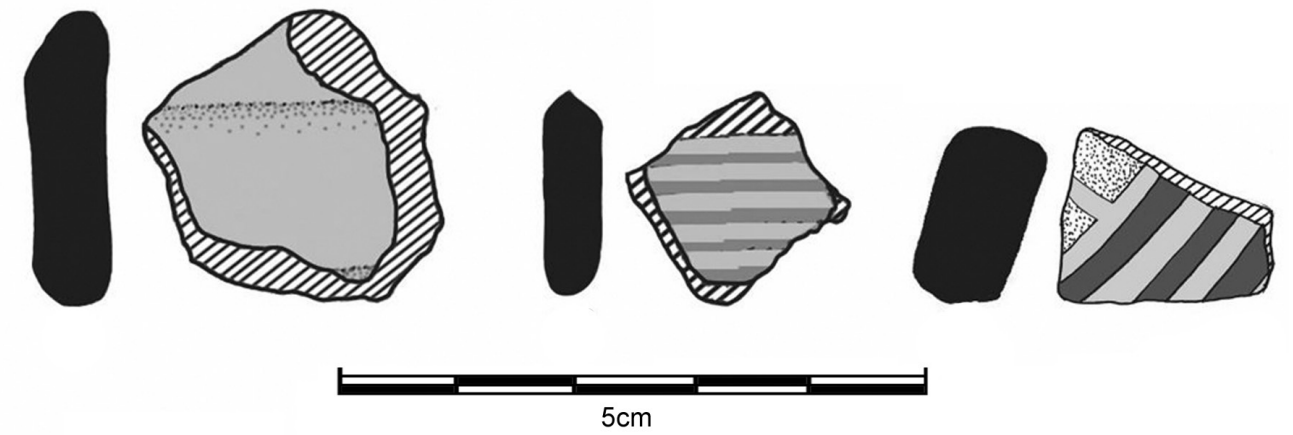

Fig. 13: Reserve Slip Ware of Ahar Culture

Black on Red Ware

The Black on Red Ware is akin to the Malwa culture of Central India. It is characterised by the presence of a red/ orange colour slip over which paintings in black have been made. The Black on Red Ware is represented by globular pots (Fig. 14). The texture or fabric ranges from medium-fine to coarse, with a few specimens with fine fabric. The ware is mostly medium to ill-fired, with a few specimens showing well-firing. The ware was produced using a fast-wheel technique with thick and thin sections present within the assemblage.

The painted motifs are restricted to geometric designs. The design repertoire consists of horizontal lines, slanting lines, curvilinear bands, wavy lines, and dots (Fig. 14).

Cream Slipped Ware

The Cream Slipped Ware is also akin to the Malwa culture. It is characterised by the presence of a cream colour slip. The Cream Slipped Ware is represented by a single shape of basin (Fig. 15). The texture or fabric is coarse. The ware is medium-fired and was produced using a fast-wheel technique. The ware is represented by thick sections. The pot has been decorated with incisions in the form of slanting lines (Fig. 15).

Gritty Red Slipped Ware

The Gritty Red Slipped Ware is represented by forms such as globular pots, and basins (Fig. 16). The texture or fabric is coarse in nature. The ware is mostly medium-fired with a few specimens showing ill to well-firing. The ware was produced using a fast-wheel technique. The ware is mostly thick in section, with a few specimens having thin sections. Incisions in the form of horizontal lines, slanting lines, and chequered patterns have been made (Fig. 16).

Red Slipped Ware

The Red Slipped Ware is represented by forms such as globular pots, bowls, and basins (Fig. 17). Basins are characterised by a rusticated exterior surface. The texture or fabric ranges from medium-fine to coarse, with most of the sherds having a coarse texture. The ware is mostly medium-fired with a few specimens showing medium to well-firing. The ware was produced using a fast wheel technique, with both thick and thin sections present within the assemblage.

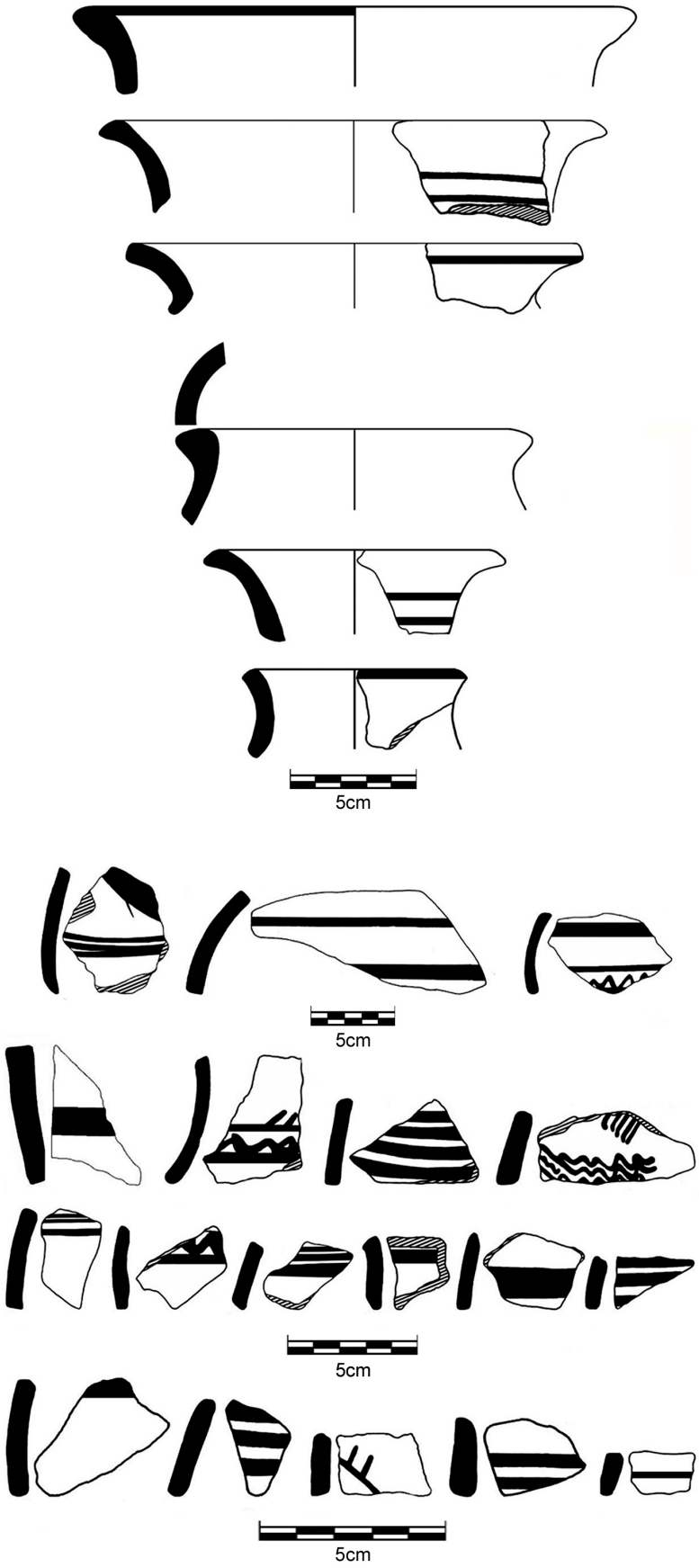

Fig. 14: Black on Red Ware of Ahar Culture

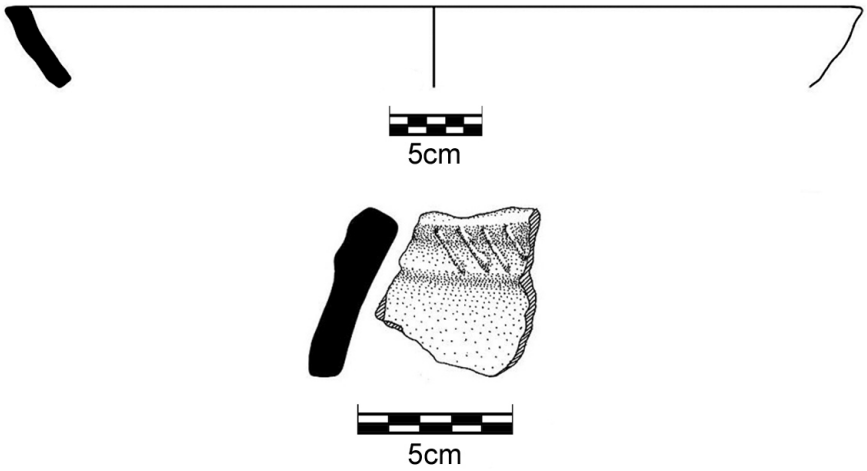

Fig. 15: Cream Slipped Ware of Ahar Culture

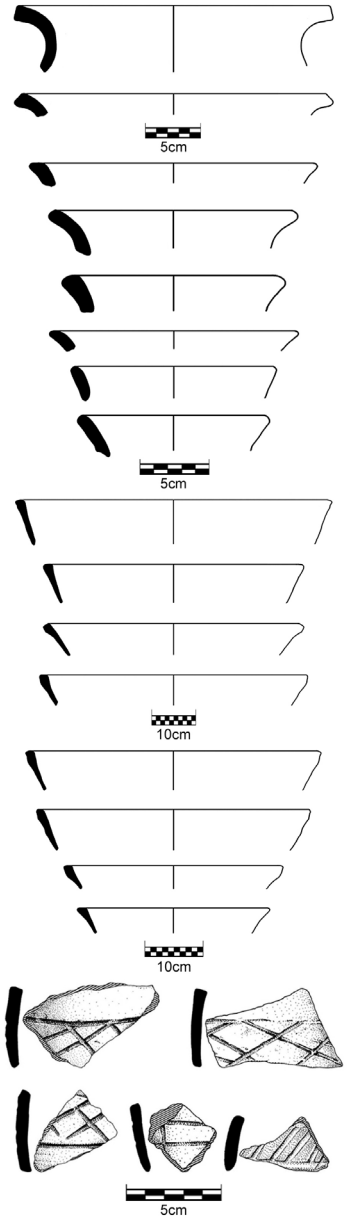

Fig. 16: Gritty Red Slipped Ware of Ahar Culture

Designs in the form of incisions, applique, clay scooping, and finger pinching have been done. Incised designs are mostly geometric. The motif repertoire consists of chevron, slanting lines, horizontal lines, ladder motifs, chequered patterns, nail impressions, zig-zag lines, triangle, rectangle, diamond, curvilinear lines, inverted 'V' motif, 'V' shaped motifs, opposed slanting lines, vertical lines, nail impressions in serpentine shape, double 'V' motif, herringbone pattern, semi-circles, dots. The naturalistic motifs constitute the fish and leaf motif. Applique designs involve applying a thin layer of clay to the pot in different forms. Within the Red Slipped Ware, loops, clay roundels, horizontal lines, a chain pattern with finger pinching, and a wavy design have been made as applique designs. In some cases, the designs combine incised and applique designs (Fig. 17).

Red Untreated Ware

The Red Untreated Ware is characterised by the absence of any surface treatment. The Red Untreated Ware is represented by forms such as globular pots (Fig. 18). The texture or fabric ranges from fine to coarse. The ware is mostly medium-fired with a few specimens showing ill to well-firing. The ware was produced using a fast-wheel technique, with both thick and thin sections present within the assemblage.

Designs in the form of incisions, applique designs, and thumb impressions have been done. Incised designs are geometric. The motif repertoire consists of nail impressions, ladder, chequered, chevron, herringbones, and inverted 'V' patterns apart from slanting and horizontal lines. Applique designs involve applying a thin layer of clay to the pot in different forms. Within the Red Untreated Ware, loops and clay roundels have been made as applique designs. In some cases, the designs combine incised and applique designs (Fig. 18).

Black/ Grey Ware

The Black/ Grey Ware is represented by forms such as globular pots, bowls, and basins (Fig. 19). The texture or fabric is mostly coarse with some examples of medium-fine and medium-coarse fabric. The ware is mostly ill-fired, with a few specimens showing medium-firing. The ware was produced using a fast wheel technique, with two examples of vessels made on a slow wheel. It is mostly thick in sections, with a few sherds having thin sections.

Designs in the form of incisions, applique, and finger pinching have been done. Incised designs are geometric in nature. The motif repertoire consists of slanting lines, horizontal lines, ladder motifs, chequered patterns, nail impressions, and diamonds. Applique designs involve applying a thin layer of clay to the pot in different forms. Within the Red Slipped Ware, loops, inverted loops, wavy and 'V' patterns are present (Fig. 19).

Early Historic Period Ceramics

The Early Historic pottery was recovered from pits exposed in the upper portion of the site. The Early Historic ceramic assemblage has been categorised into White on Red Ware, Red Slipped Ware and Red Untreated Ware. In all these wares, a slip has been applied on the exterior and interior in the case of open vessels such as bowls and basins. In the case of closed vessels such as the globular pot, the slip has been applied on the exterior and up to the throat on the interior. The White on Red Ware has paintings in white over the red colour slip.

White on Red Ware

It is represented by spouts and body sherds. The texture or fabric is medium-fine. The ware is well to medium-fired and was produced using a fast-wheel technique. It is thin and thick in section. Paintings are in the form of horizontal bands (Fig. 20).

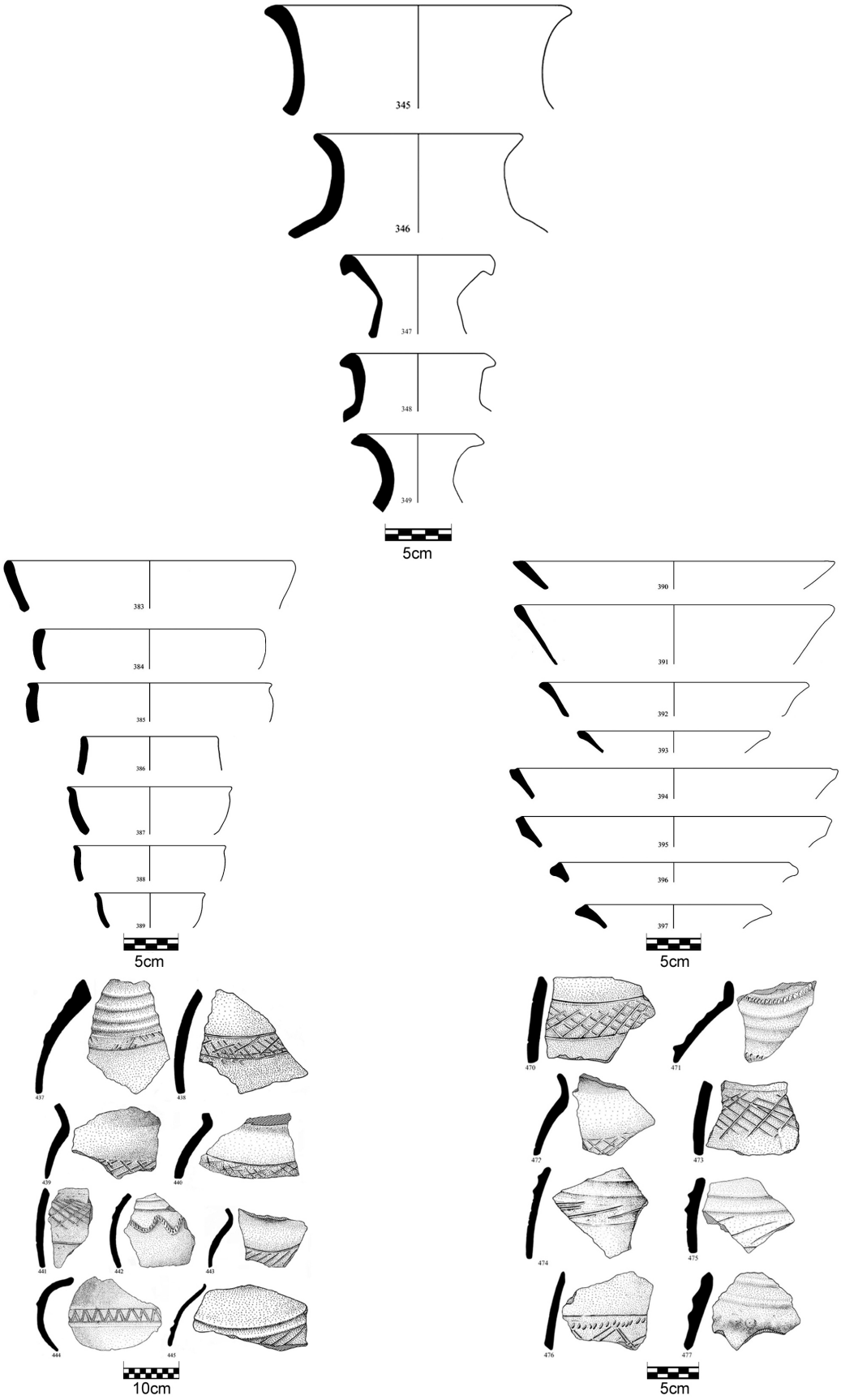

Fig. 17: Red Slipped Ware of Ahar Culture

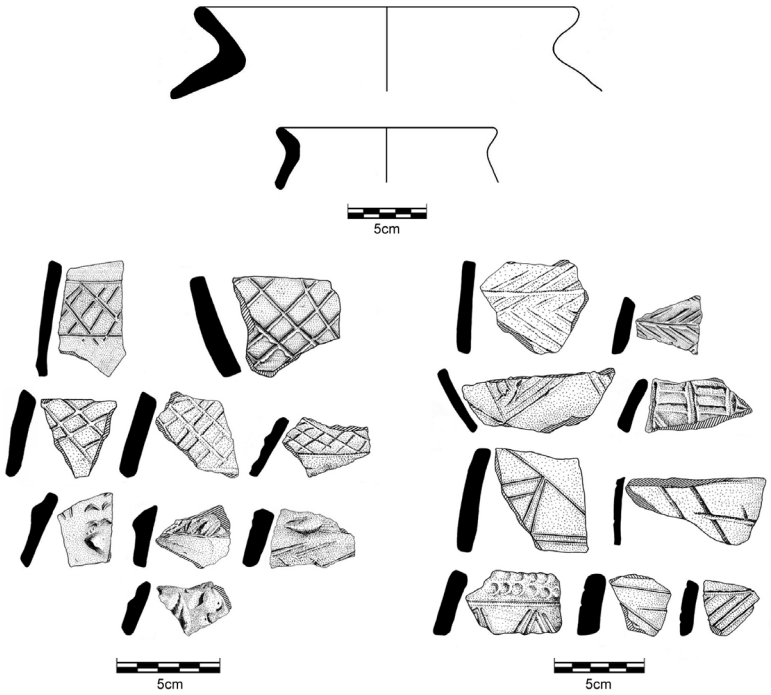

Fig. 18: Red Untreated Ware of Ahar Culture

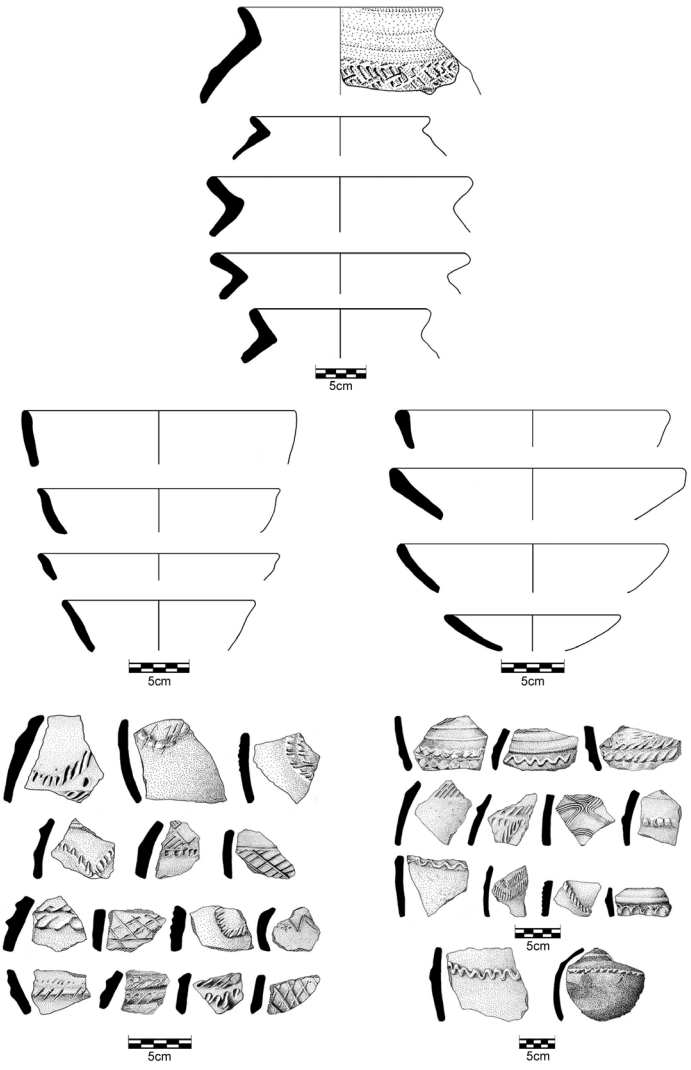

Fig. 19: Black/ Grey Ware of Ahar Culture

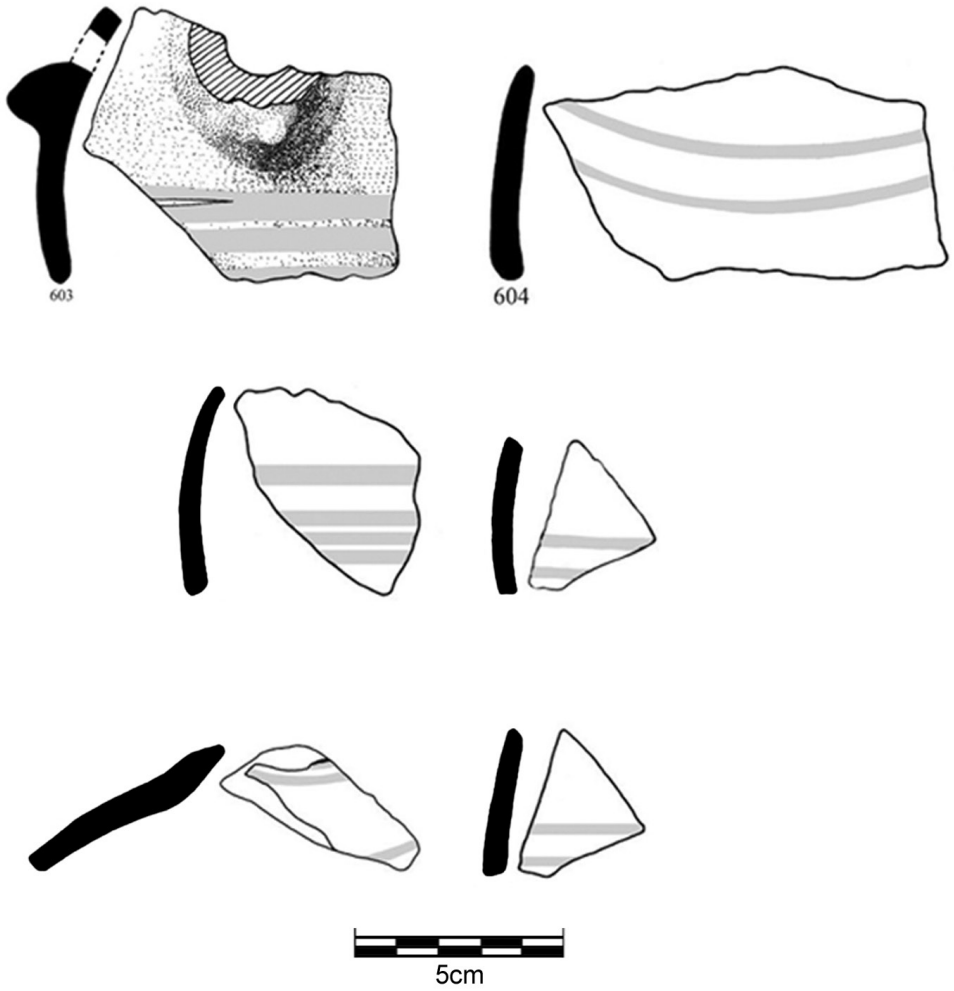

Fig. 20: White on Red Ware of the Early Historic Period

Red Slipped Ware

The Red Slipped Ware is represented by forms such as globular pots, basins and spouts (Fig. 21). The texture or fabric is mostly medium-fine to medium-coarse fabric. The ware is well to ill-fired, with a few specimens showing medium-firing. The ware was produced using a fast-wheel technique. It is mostly thin in sections, with a few sherds having thick sections.

A stamp design in the form of a spiral motif has been made on the sherds.

Red Untreated Ware

It is characterized by the absence of any surface treatment. It is represented by forms such as globular pots and bowls (Fig. 22). The texture or fabric is mostly medium-fine to coarse. The ware is well to ill-fired. The ware was produced using a fast-wheel technique. It is mostly thin in section with a few sherds having thick sections.

Ceramics Summary

In sum, all of the local pottery types are present at Pachamta. Compared to other Ahar Chalcolithic sites, Pachamta has more Black and Red Ware, particularly White Painted Black and Red Ware. The designs were geometric, with no animals, plants, or humans identified. Wares were predominantly

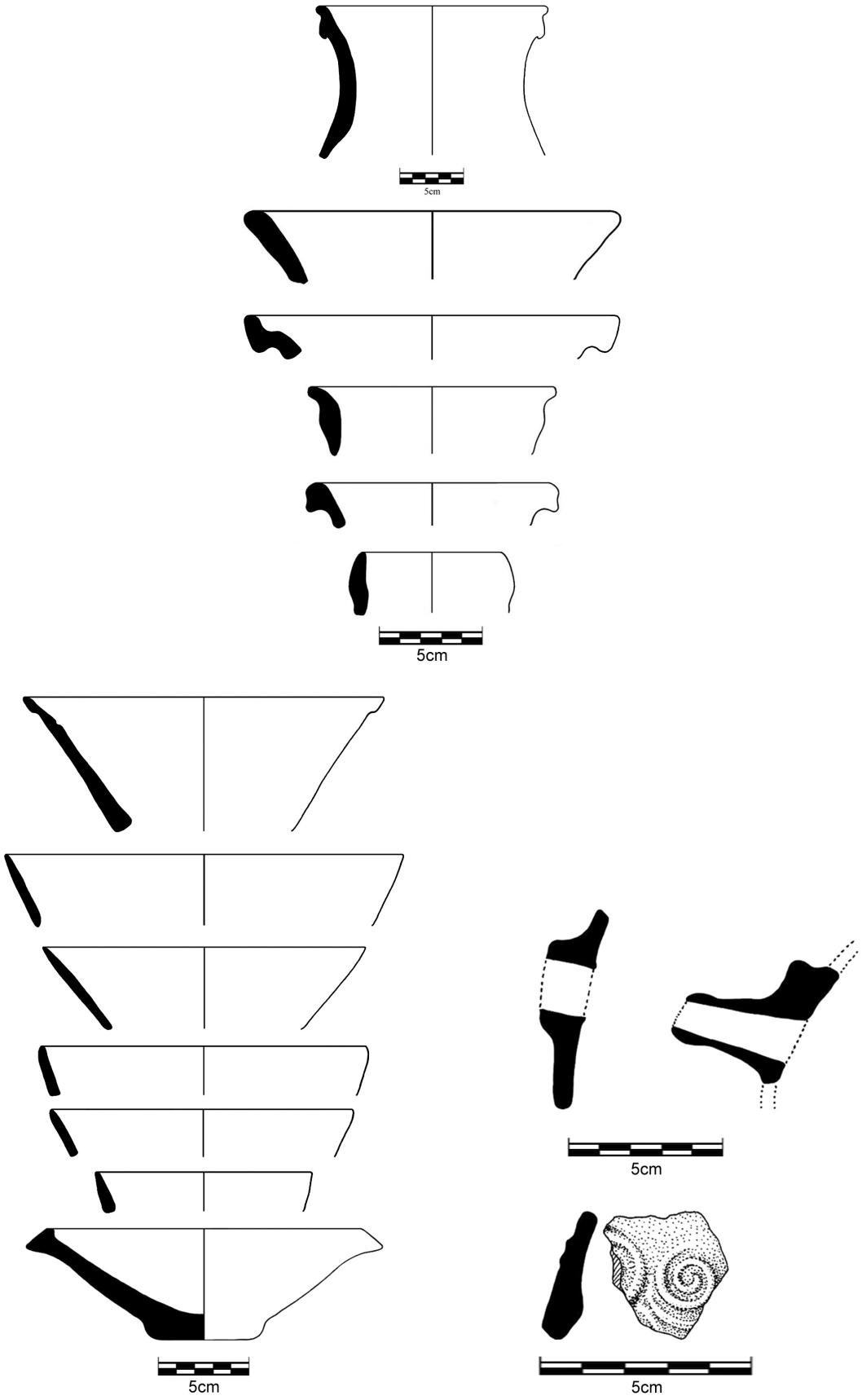

Fig. 21: Red Slipped Ware of the Early Historic Period

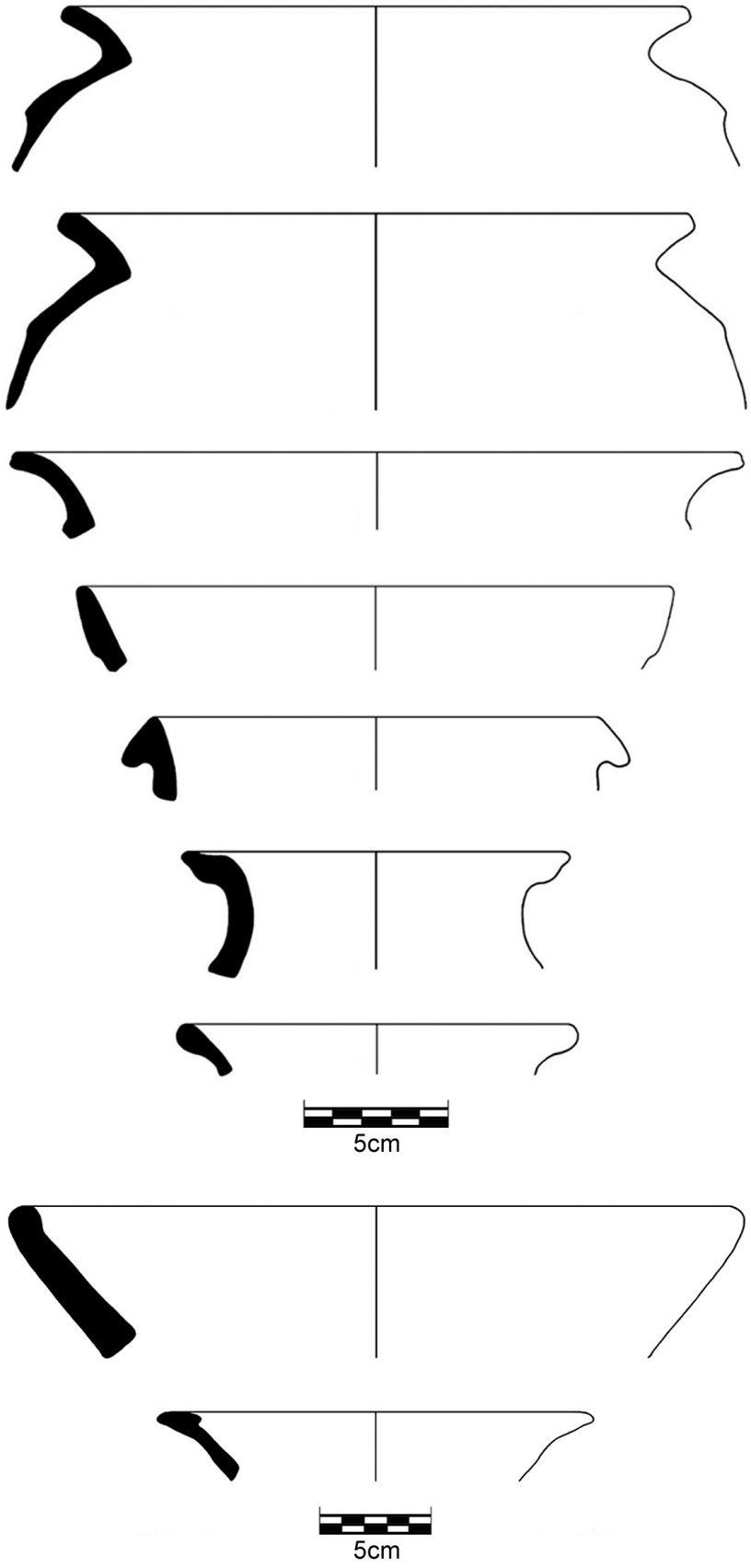

Fig. 22: Red Untreated Ware of the Early Historic Period

made with fast wheel, suggesting that they were made by skilled potters who pursued this work either part time or full time. The presence of Black on Red Ware, more common in the Malwa region, suggests ongoing trade and exchange with that region to the southeast.

Artifacts and Antiquities

The antiquities (Fig. 23) found are typical of Ahar Chalcolithic culture. Terracotta items include miniature pots, discs, perforated discs, votive tanks, and seals. Shell artifacts included beads, bangles, inlay pieces, and bone points. Stone antiquities include beads (semi-precious stones and steatite), sling balls, querns, mullers, and microliths. While many of these items may have been made on site, some were likely acquired through trade and exchange. This is particularly true for items made of some non-local stone materials and shell.

Fig. 23: Antiquities of Ahar Culture

Discussion

At 20 ha, and five mounds, the site of Pachamta was among the largest sites of the region during the Ahar Chalcolithic period. Our analysis of the architecture and material culture shows that it had a robust economy and that it regularly engaged in local and long-distance exchange. The large parallel-walled structure that was modified over time is similar to that of Gilund and is thought to be used for storage and administration. The excavators at Gilund argued that the site was likely a regional centre (Shinde *et al*. 2014a). However, Pachamta, located less than 7 km away, is similar in size and has a similar makeup. Because of this, we would like to propose that Pachamta and Gilund were both likely prominent centres of economic and political power during the Ahar Chalcolithic. This suggests that the regional dynamics were very complex and may have shifted over time.

As previously mentioned, social, economic, and political shifts between the Early, Middle, and Late Ahar Chalcolithic periods have been understudied. The earliest dates in the region come from Balathal, which has evidence of all three phases. The other excavated sites, such as Ahar, Gilund, Pachamta, Chatrikhera, and Ojiyana, are devoid of the Early Ahar phase. During the succeeding period, i.e., Middle Ahar, various smaller settlements emerged, and a major regional centre came up at the site of Gilund. This shift in the population patterns has also been documented through site catchment surveys. Within the catchment of Balathal, only three settlements identified as agricultural settlements and belonging to the middle phase have been reported (Dibyopama 2009). However, in the vicinity of Gilund, one can see a large number of smaller settlements being established. In a radius of 10km, there are 24 sites, which have been categorized as herding units, agricultural, pastoral, farmstead, and camp (Dasgupta 2005; 2006). Many of these sites are also within walking distance of Pachamta. The dating of these sites is based on the Gilund pottery sequence, categorising them as belonging to the Middle Ahar phase. It is interesting to note that the site of Pachamta was originally identified as belonging to the Middle Ahar phase, but the excavations at the site confirm that the site mainly belongs to the Late Ahar phase. This raises questions regarding the dating of the other reported Ahar Chalcolithic sites and further muddies our understanding of the transition between the three phases.

However, we do see some evidence of shifts occurring between Middle and Late phases. For example, the excavators at Gilund report that the site shrank in the Late Ahar Chalcolithic (Shinde *et al*. 2014a). In contrast, Pachamta appears to have maintained its size through the Late Ahar Chalcolithic. In addition, the large parallel-walled structure at Gilund appears to have been constructed and used in the Middle Ahar Chalcolithic, while the one at Pachamta was constructed and used in the Late Ahar Chalcolithic. Finally, we see changes in pottery at both sites between the Early and Late Ahar Chalcolithic periods. The Malwa Ware makes its appearance in the Late Ahar phase, as well as the quantity of White Painted Black and Red Ware tremendously increases in this area.

Changing economic and political forms and shifts in administrative units are well documented from the Early Historic period onwards, but such a change or shift in administrative powers is not documented in the Chalcolithic cultures. However, by comparing the sites of Pachamta and Gilund, we may see some clues for the shifting nature of administration based on the archaeological data.

Conclusion

The Mewar Plain Archaeological Assessment successfully showed the importance of carrying out small projects in rescuing sites and establishing them on an archaeological map. With the growing urbanization and industrialization, most of the sites are getting destroyed, and we are losing a piece of history. However, small-scale excavations can document the material culture and address long-standing research questions about regional chronologies and social, economic, and political forms.

Such initiatives are vital for Indian archaeology to protect at-risk sites and secure cultural resources for the future. The excavations at Pachamta successfully established the site's chronology and raised important questions regarding shifting power structures and administration during the Ahar Chalcolithic phase.

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