

THE ORIGIN AND DEVELOPMENT OF THE CHALCOLITHIC IN CENTRAL INDIA

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INTRODUCTION

The origins of village life in South Asia were first documented at Kile Ghul Mohammad in the Quetta Valley (Fairservis 1956), then at the site of Mehrgarh at the base of the Bolan Pass on the Kachi Plain of the Indus valley (Jarrige 1984). Both these sites demonstrate cultural development from the seventh millennium BC to the emergence of the Mature Harappan phase in the middle of third millennium BC. Peninsular India, particularly the Deccan and Central India, witnessed the origins of village life quite late, in the middle of the third millennium BC. Until the discovery of the Chalcolithic Cultural Phase A at Balathal a couple of years ago, it was hypothesised, on the basis of available evidence, that the influence and technology of agriculture began to spread to the Deccan and Central India from the Harappans in the western and northwestern part of India (Shinde 1990). The recent excavation at Balathal (Udaipur District) in the Mewar region of Rajasthan, however, has demonstrated that the origins of village life began in the early part of the third millennium BC, before the emergence of the Mature Harappan phase. The origins appear to be a local development but the evidence from the site of Balathal suggests that the process flourished after contacts were established with the Harappans in the middle of the third millennium BC. This flourishing period of the Chalcolithic at Balathal has been termed Cultural Phase B, dating from 2400-1700 BC.

Central India consists of two major geographical units, namely the Malwa Plateau and the Chambal valley, and also includes the southeastern part of Rajasthan (Mewar region), which is an extension of the Malwa plateau. Though the entire region is fertile because of the presence of black cotton soils, it falls in the semi-arid zone, which is characterised by a low and unpredictable rainfall and shrub forest. The river Narmada is perennial but other rivers like the Chambal, Banas and scores of their tributaries are seasonal in nature.

The vertical excavations at Ahar (Sankalia *et al.* 1969), Gilund (IAR 1959-60) and Kayatha (Ansari and Dhavalikar

1973) in central India have provided a complete regional cultural sequence starting from the Chalcolithic, whereas the large-scale horizontal excavations at Navdatoli (Sankalia *et al.* 1971) and Balathal (Misra *et al.* 1995 and 1997) have thrown light on various aspects of the life style of the early farming communities of this region (Figure 1).

ORIGINS

The early farming communities (Chalcolithic culture) flourished in the ecological unit that is characterised by environmental uniformity, fertile black cotton soil and semi-arid climate. Culturally, the various Chalcolithic phases found over this large landscape also display a certain uniformity. These include painted, wheel-made ceramic traditions, a specialised blade/flake industry, restricted use of copper, and subsistence based on farming, stock-raising and limited hunting. They constructed rectangular or round mud houses. In the absence of diagnostic ceramics and tight chronological control, it becomes near impossible to distinguish separate loci for different cultures across the entire region.

Based on palynological data from Rajasthan lake deposits, the following climatic sequence for the Holocene period has been reconstructed:

- Before 8000 BC - severe aridity
- 8000 - 7500 BC - relatively wet
- 7500 - 3000 BC - relatively dry
- 3000 - 1700 BC - sudden increase in wetness
- 1700 - 1500 BC - relatively dry
- 1500 - 1000 BC - relatively wet
- 1000 - 500 BC - arid (Krishnamurthy *et al.* 1981).

This climatic sequence can be applied also to the larger semi-arid region that makes up Western and Central India. It is argued that these climatic fluctuations were responsible, to a certain extent, for the origins of early farming communities and for cultural changes. It is believed that an abundance of plant and animal food to hunter-gatherers

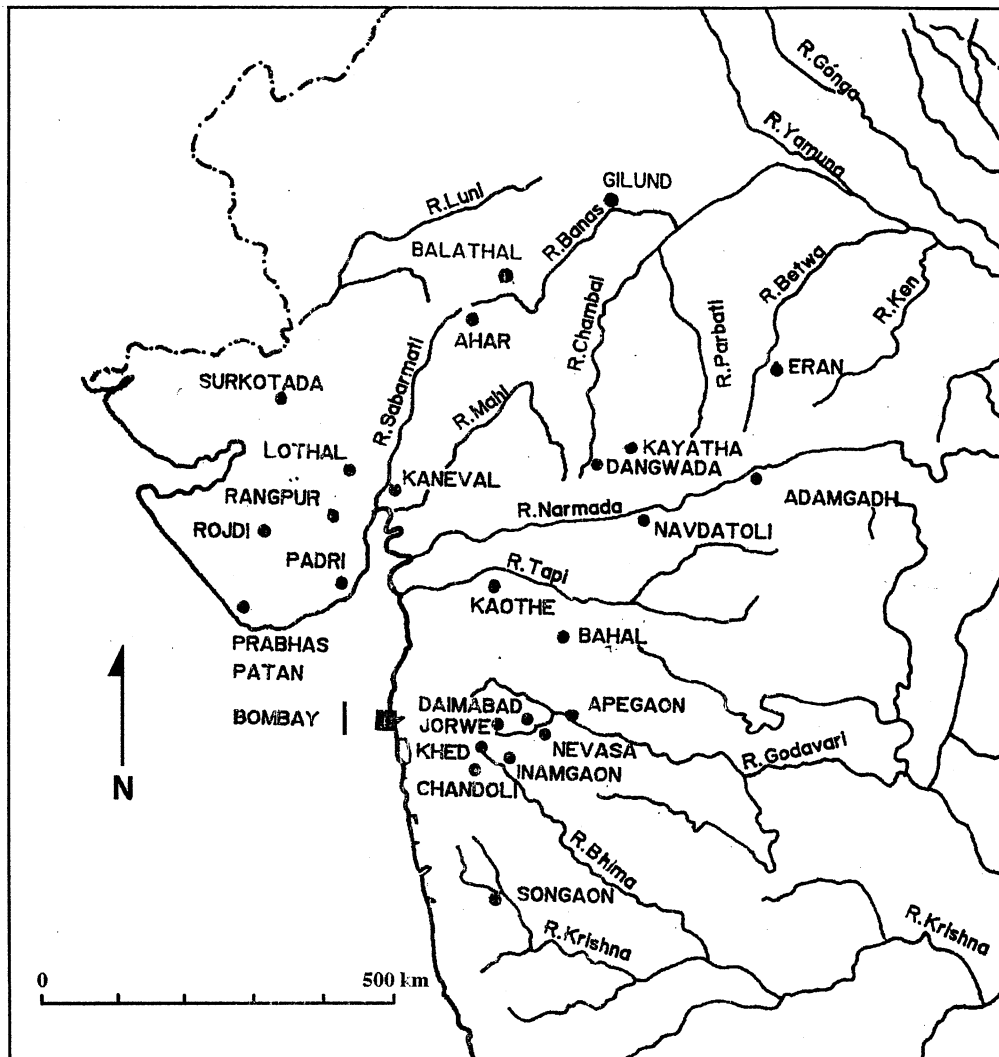


Figure 1: Map showing important Chalcolithic sites in Central India.

around 10,000 years ago possibly led to an explosion in the size of the Mesolithic population. This is evident in the sudden increase in numbers of Mesolithic settlements all over the subcontinent. The congenial climate enabled them to flourish (Dhavalikar 1988).

The second reason cited for the origins of agriculture in this region is the presence of the fertile black cotton soils. The distribution of Chalcolithic settlements in central India clearly demonstrates that the major concentration was in proximity to these soils. Kosambi (1963) raised doubts about the characteristic features and agricultural potential of the black cotton soil. He stated that it is sticky and hard and can be ploughed effectively only with the help of iron implements. It seems that Kosambi failed to take note of the observations made by Wallace (1888), who was fascinated by the highly moisture retentive qualities of the soil and

stated that it ploughs itself. He also observed that the soil develops deep and wide cracks in the dry season and swells in the rainy season. Because of the process of expansion in the rainy season the soil becomes quite loose and even wooden Dutch hoes are sufficient to plough it. Considering Wallace's observation it can safely be presumed that the Chalcolithic people fully exploited this fertile soil, which is spread all over central India (Shinde 1987).

As regards the origins of the village life in this region, no sufficient and convincing archaeological evidence has yet come forth. So far it has been firmly believed that the Harappans in Gujarat played an important role in the origin and development of the Chalcolithic in western India (Shinde 1989, 1990, 1994). This hypothesis was propounded on the basis of the evidence of a sudden appearance of advanced technologies of pottery, copper and bead manufacture. It

was thought that these technologies were supplied to the early farmers of northwestern India by the Harappans.

However, the recent archaeological evidence from Balathal suggests that village life emerged before the development of the Mature Harappan at around 2500 BC. The beginning of the settled life in this region now goes back to the early part of the third millennium BC, as indicated by the radiocarbon dates from Balathal (Shinde in press). The Chalcolithic phase in the Mewar was contemporary with the Pre/Early Harappan cultures of western Rajasthan and Saurashtra.

A deposit around one metre thick at the base of the settlement (Cultural Phase A) at Balathal has produced evidence for the origin of village life and a gradual subsequent development in material culture. This evidence comes from a limited area. The natural level beneath the site has been reached so far only in an area of 250 m² out of a total excavated area of roughly 1800 m². The people, who established their settlement on the bedrock, constructed simple mud and wattle-and-daub structures. In trench HX2, remains of a circular hut 2 m in diameter with a well-made floor plastered with cow dung and lime was found (Figure 2). The floor was made of alternate layers of brown silt and black clay rammed hard. The presence of a few postholes

located on the periphery of the structure suggests that the wall was supported by wooden posts. The use of stone and mud brick for construction was conspicuous by its absence in this early phase. One of the trenches (D2) located in the centre and another on the southern side (OE) of the settlement yielded remains of domestic hearths. On the bedrock of trench D2 was found a two-armed "U" shaped hearth, whereas the one found in trench OE was in a depression and circular in shape (12 cm diameter). Storage facilities in the form of cylindrical silos (average diameters and depths 1 m) either lined with grass or plastered with lime have also been found. The use of food processing equipment such as heavily worn saddle querns, mullers and rubbing stones of locally available granite was common from the beginning of the settlement. This evidence is significant and suggests that right from the beginning agriculture played an important role.

The first settlers at Balathal used earthenware pottery. Some of the characteristic Chalcolithic wares, such as thick Red, thin Red and Black-and-Red, were produced right from the beginning. However, the technology was handmade and used inferior raw materials and firing techniques. Most sherds are coarse, thick in section and inadequately fired. Shapes such as wide-mouthed and deep carinated bowls,

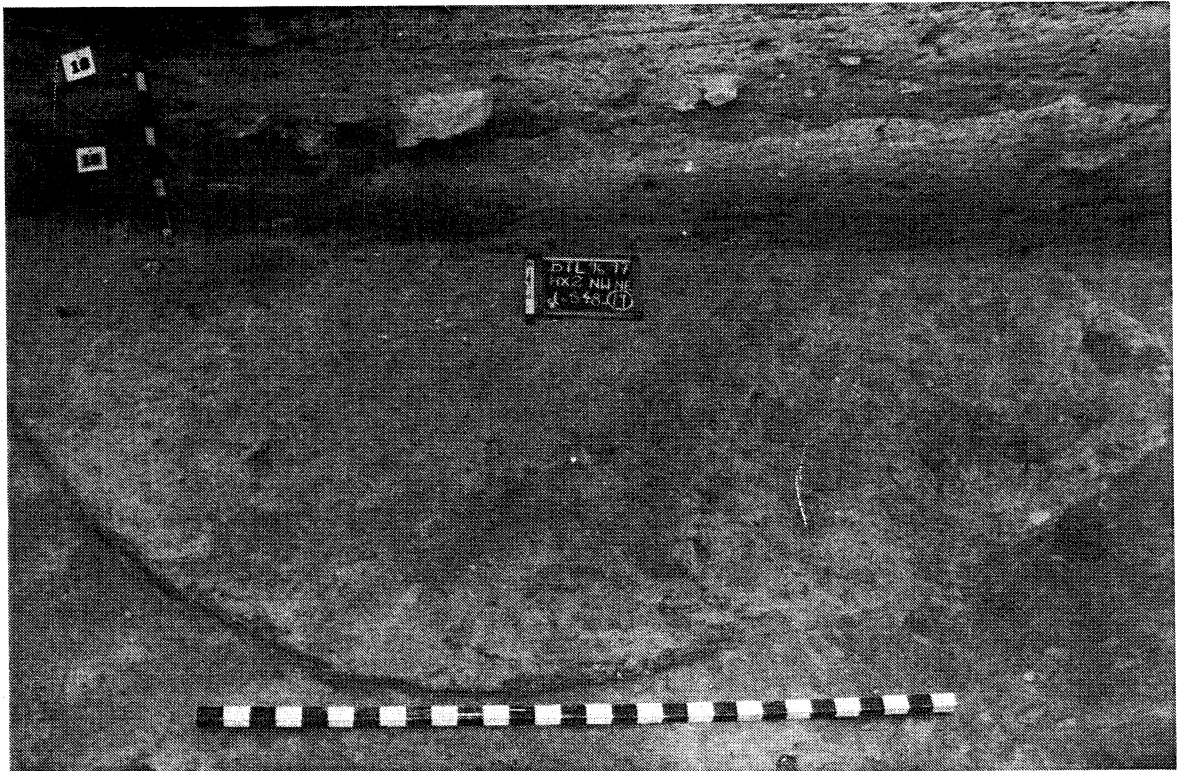


Figure 2: Part of the floor of a circular hut, Cultural Phase A, Balathal.

small narrow-mouthed jars and storage jars with beaded rims, the main forms of the Chalcolithic phase in this region, are present right from the beginning. Reserve-slipped ware, earlier thought to be the handiwork of Harappans, was also used by the pioneering settlers of Mewar. Since the earliest known occurrence of this ware in India is at Balathal, it may be inferred that the techniques for its production developed there and were later borrowed by the Harappans after they established close contact with Mewar around 2400 BC.

Discovery of a few copper fragments, beads of steatite and semi-precious stones such as carnelian and agate is testimony to the introductions of copper working, tool and bead manufacturing technologies from the beginning of the settlement. However, frequencies are very small. Animals such as cattle, buffalo, sheep and goats were domesticated by the first farmers of this region. Unfortunately, it was not possible to recover any botanical remains from the lowermost levels at Balathal and therefore it is not possible to make any inference regarding the agricultural activities of these people.

The early Chalcolithic phase (Phase A) has so far been discovered only at Balathal in central India. It is contemporary with the Pre/Early Harappan phase found in the northwestern part of Rajasthan, at a few sites like Kalibangan and Sothi. A series of C14 dates suggest a time bracket of 2900-2600 BC for this phase. A number of other Chalcolithic sites have been excavated in the Deccan and central India but none of them have yet produced evidence for this early phase (Phase A).

The excavation work carried out at sites like Navdatoli, Kayatha, Eran and Nagda suggests that all them were first occupied in Chalcolithic Phase B, dated between 2500 and 1600 BC, the most prosperous period of the Chalcolithic culture. It appears that these developments took place at a few sites only and subsequently, after they attained prosperity and their populations increased, they spread almost all over central India, including the Malwa and Mewar regions and the Chambal valley. The lower levels of Ahar (Udaipur District), 40 km southwest of Balathal, and Gilund (Rajsamand District), 60 km northeast, are likely to produce early phases as the earlier excavators did not study the basal levels carefully.

DEVELOPMENTS WITHIN THE CHALCOLITHIC PHASE

By 2400 BC there was a drastic change in the lifestyle of the people of Balathal. In the developed phase (Cultural Phase B) of the Chalcolithic period three principal ceramic traditions came into being. Excavations carried out in the late 1950s and after at Maheshwar, Navdatoli, Eran, Nagada, Ahar and Kayatha in central India established a stratigraphic succession of three principal ceramic traditions labelled the

Ahar Culture, Kayatha Culture and Malwa Culture, the first two named after their type-site and third after the region. Radiocarbon dates have shown that these ceramic traditions date between 2400 and 1200 BC. The present author, however, does not agree with this division of Chalcolithic phase into three cultural periods, based on just slight variations in the painted ceramic tradition. He prefers the term "phase" for the more widely used term "culture" (Shinde in press). Minor variations within the painted ceramic tradition at regular intervals in the Chalcolithic denote only internal development within the whole (Shinde 1994).

Ceramic Assemblages

A gradual development in pottery from Phase A to B is noticed at Balathal in terms of technology, shape and surface treatment. The wares introduced by the first farmers were gradually transformed into finer varieties around 2400 BC. There is also qualitative change in the raw materials used and in firing techniques. Gradually, the pottery becomes thinner in section, better fired, and there is greater use of the wheel.

The pottery of Chalcolithic phase B is predominantly wheel-made and can be broadly divided into two fine and coarse varieties. Their identification is based on the degree of purity of the clay, surface treatment, nature of firing, vessel forms and decoration. The fine variety is made of refined and well-levigated clay. It has a thin and highly burnished slip on one or both surfaces and is baked at a very high temperature. Because of these features it is sturdy, has a reddish core, looks attractive, produces a metallic sound and therefore constitutes deluxe pottery. The vessel forms in this variety mainly comprise a dish and a bowl with or without a stand, in varying sizes. The coarse variety is made of unrefined clay, is poorly fired, has a grey or black core and is mainly decorated with incised and appliqué designs. The vessel forms in this variety mainly comprise large globular pots of various sizes, used for storage and cooking.

The three ceramic traditions labelled Kayatha (Phase IB), Ahar (Phase IIB) and Malwa (Phase IIIB) can be described as follows. Phase IB (Kayatha) of the Chalcolithic period of central India is characterised by three types of ceramic assemblage, namely the Kayatha ware, painted buff ware and combed ware. The Kayatha ware is an extremely fine fabric, well-fired and coated with a chocolate coloured slip. Vessels were made in separate parts and luted together. Most pots were provided with either a ring or a disc base. Over the slip, painted patterns were executed in purple pigment. Decoration was confined to the upper half of the external surface of the pots. It includes mostly linear patterns such as horizontal bands, vertical lines and short strokes. The typical Indian *lota* with a globular body, constricted neck and wide,

flaring mouth; bowls; high and short-necked storage jars with globular profiles are some of the predominant shapes in this ware, which resembles the pre-Harappan Sothi ware in terms of fabric and surface treatment.

The painted buff ware is another important ceramic industry of Phase IB of the central Indian Chalcolithic culture. It has a thin core and fine fabric. The pots, made on a fast wheel, were treated with a buff wash but sometimes the colour varies from yellowish to pinkish. The painted designs over this background are executed in black. They include geometric patterns such as hatched diamonds, vertical and horizontal bands. The most predominant forms include the Indian *lota* with a concave neck and globular body, either with or without carination. Other forms, not so common, include a dish or shallow bowl and a basin (Ansari and Dhavalikar 1973).

Another ceramic industry associated with Phase IB is termed combed ware. This is also a fine fabric pottery, made on a wheel and fired to a high temperature. It is devoid of slip. The sobriquet "combed ware" has been given because of the decoration of groups of incised lines executed with the help of a comb-like instrument. The most common patterns seen on this ware are horizontal wavy lines and zigzags in groups. It is represented mostly by bowls and basins only. This ware is close to the pre-Harappan Fabric D of Kalibangan (Ansari and Dhavalikar 1973).

Phase IIB of the central Indian Chalcolithic period is characterised by four different wares, namely thin red, black-and-red painted on white, tan, and reserve-slipped. The thin red ware has a thin, highly burnished slip on its external surface which is generally plum red but occasionally tends to be brownish red, tan or chocolate. The inner surface is without any slip or wash and is generally greyish. The shapes in this ware mainly consist of convex-sided deep bowls of various sizes and occasionally of small globular vessels with an everted rim, narrow mouth and high neck. They are decorated by a single row of punctate or incised triangles, and occasionally by single or double ridges in low relief on the shoulder. The rims of some pots were made separately and luted to the body.

The black-and-red ware is so named because the entire inner portion and the shoulder portion of the outer surface of the pot are black while the rest of the external surface is red. This effect is believed to have been achieved by an inverted firing technique. Both surfaces were treated with a slip and burnished. The pots in this ware are painted in white pigment, either inside or outside. The decoration seems to have been executed after the pots were fired and therefore it tends to fade. The motifs include groups of straight or wavy lines, spirals, dots and circles. The shapes in this ware mostly comprise wide-mouthed, convex-sided bowls of varying sizes.

The tan ware is of medium thickness and has a thin slip of light orange colour. Some sherds in this ware have a thick brown or chocolate coloured slip, similar to that of Kayatha ware. The principal shapes in this ware are a dish, dish-on-stand and bowl-on-stand, with considerable variations in size. Other shapes are large convex-sided bowls with thick rims, globular pots with either beaded or flat projecting rims, and large basins with ledges on the neck. Prominent ledges may have been used to hold the vessels while low ledges may have been purely decorative. Two basal sherds of globular pots with ring bases have been reported from Balathal. A few perforated pots, similar to those used by the Harappans, have also been found. In respect of fabric and shape this ware is identical to the Harappan pottery of Gujarat, although unlike the latter it lacks painted decoration.

A number of sherds of reserve-slipped ware have been found in the Chalcolithic levels at Balathal and comprise two types: imported grey and locally-made red. The imported reserve-slipped ware is made from a very fine paste, uniformly fired to a high temperature and treated with a dark greyish slip. The outer surface is highly burnished. The combed patterns executed on the outer surface are done carefully and meticulously when compared with the locally produced variety. Shapes cannot be discerned as only body sherds have been found. The painted decoration includes a set of eight zigzag lines, a broad band of light greyish colour on the neck, a set of running loops below a horizontal line, double horizontal bands below which is a pattern resembling a serrated edge, and horizontal lines at regular intervals filled in with dots.

The local variety is reddish in colour and is made from a fine clay to which fine sand has been added as a tempering material. It is fired uniformly to a high temperature and therefore the core has turned brick-red in colour. It was first treated with a red or yellow wash over which a thick, dark red slip was applied. When the slip was wet various patterns were executed by scooping out the dark red slip possibly using comb-like instrument. The patterns are usually found in sets or groups. Only a shallow dish with a round, slightly incurved rim, cylindrical hollow stem and stand with flared sides and short, out-turned ring foot is found in this ware. The decoration, mainly on the inner surface, consists of closely spaced horizontal lines and sets of zigzag lines (Misra *et al.* 1995).

The coarse pottery is represented by thick bright-slipped red ware and grey ware, both of which were locally produced and primarily used for storage and cooking. These wares are made of coarse clay, are poorly fired and are mainly decorated with incised and appliqué designs. In the red ware the most common forms are large narrow-mouthed and wide-mouthed globular jars, a small *handi*, and dishes-on-stand. They are treated with a bright red slip on the upper part of

the external surface. The middle part of the external surface is decorated with two or more parallel raised bands and a variety of incised designs like multiple wavy lines, chevrons, herringbone patterns, criss-crosses and triangular incision.

Phase IIIB of the Central Indian Chalcolithic culture is characterised by the Malwa ware, which is the most profusely decorated ware in the Chalcolithic period in India. It is either orange or buff in colour and bears painted decorations in black colour. The pottery was wheel-turned, either slow or fast. The clay used for the manufacture of this ware contains temper materials such as sand, chopped grass and husk. Being coarse fabric, the pottery is not well fired. The important types include the typical Indian *lota* with elongated, bulbous belly and wide flaring mouth; the concave carinated bowl; and a high-necked storage jar with a globular body. Navdatoli has produced cups-on-stands, channel-spouted cups and pedestalled goblets. These have significant parallels in Iran and hence may be associated with Indo-Aryan speaking populations (Sankalia 1963). Over six hundred different motifs occur on Malwa ware, including primarily geometric forms such as triangles, lozenges and linear patterns. There are some naturalistic motifs such as animals, birds, dancing human figures and plants. The finer variety of Malwa ware found at Eran is called "Eran Fabric".

In the grey ware there are two varieties, burnished and plain. In the burnished variety the upper part of the exterior is slipped and highly burnished while the plain variety bears a slip but has no burnishing. The lower part of the outer surface of vessels in this variety is roughened by the application of sand mixed with clay and is often covered with soot, showing that the vessels were used for cooking. The most common vessel forms in both the varieties are wide-mouthed small *handis*. The middle portion of the external surface is decorated with incised and appliqué designs similar to those on the burnished red ware. The other shapes in plain grey ware are the shallow hand-made *tawa*, apparently used for making *roti* or unleavened bread, and lids, sometimes with handles.

Chalcolithic Architecture

There is a marked change in the size of structures and the materials and techniques used in construction from the beginning of Phase B. The almost complete layout of the settlement has been uncovered in the course of five seasons (1994-98) at Balathal. The other sites in central India were excavated on a smaller scale and so only individual or partial structure plans were recovered. On the basis of previous work it has been hypothesised that the Chalcolithic people constructed either rectangular, squarish or circular mud structures with wattle-and-daub walls. The large-scale horizontal excavations carried out at Balathal (Misra *et al.* 1995 and 1997), have changed this (Sinha 1998).

The architecture of this phase is marked by the extensive use of semi-dressed and undressed stones and mud bricks. Four structural phases have been identified at Balathal. Only two walls of structural Phase I have been exposed so far. This is mainly because the well-preserved structures of structural Phase II overlie the earlier phase. Structural Phase II, extensively exposed and represented by the fortified enclosure, outer fortification and multi-roomed residential complexes at Balathal, represents economic prosperity and evidence of stratified social organisation. These structures are characterised by large and massive walls of stones, mud-brick and mud. There is evidence of incipient planning. Structural Phases III and IV mark a degree of economic decline.

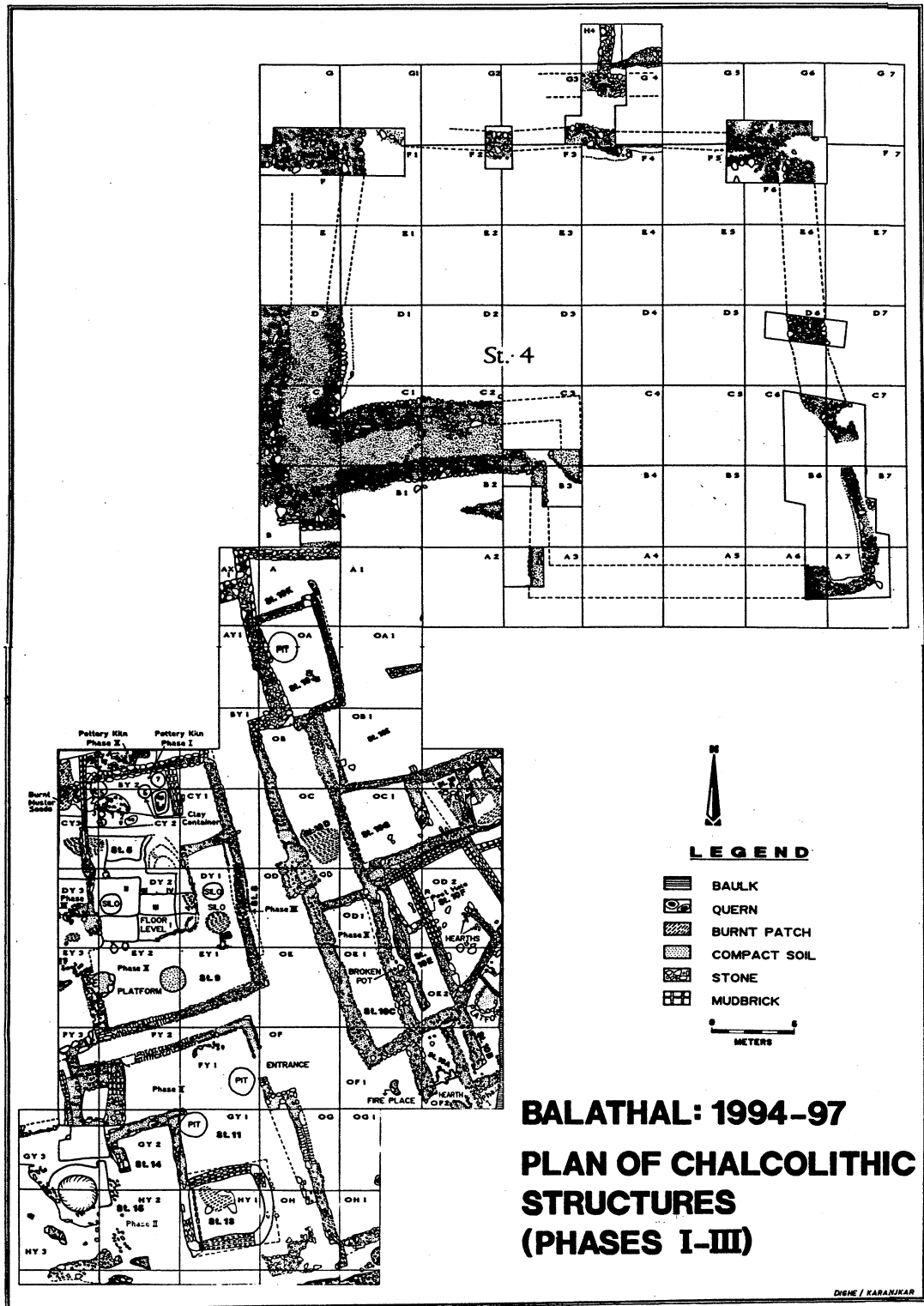
The Phase II Fortified Enclosure (Figures 3 and 4)

This unique structural feature was constructed in the middle level of the Chalcolithic phase at Balathal. It was built around a 70 cm high platform made of a mixture of clay, silt, brickbats and bricks. This method of construction was introduced by Harappans for the building of the citadel parts of the settlement. The structure is roughly rectangular in plan with its longer axis running east-west. It has walls constructed with cores of mud and brickbats supported on both sides by stone courses set in mud mortar, these stone walls being 1.25 m thick. The average thickness of the whole wall at the top is 4.80 m, gradually broadening to 6.50 m at the base. It is because of this construction method that the wall has survived in places to a height of nearly 4 m. A large area of this structure has been exposed in its southwestern part, where both the inner and outer stone walls have been exposed. The ground plan of the interior of the fortified enclosure has been exposed in a number of sondages at different points. In the southwestern corner there is a roughly rectangular bastion. The southern wall runs east-west for 16.45 m and then takes a right-angled turn to the south. After running for 9.50 m it again turns to east for 14.30 m to join the south-eastern corner. The western wall is 27.40 m long and runs north-south. The northern wall is 38.35 m long. The eastern wall does not run straight; it is 37.65 m long. The eastern wall is the thickest at 6.80 m.

The total area enclosed by the structure is roughly 500 m². Inside, at least three very well made floor levels have been exposed suggesting that it was in use for a considerable period. Since only a very small area inside the enclosure has been exposed, it is difficult to determine its exact function (Figs. 3 and 4).

Structural Complexes

On the southern side of the settlement, a number of residential structures were exposed in the course of excavations (Figure 4).



**BALATHAL: 1994-97
PLAN OF CHALCOLITHIC
STRUCTURES
(PHASES I-III)**

Figure 3: Balathal Phases I-III: Detailed plan of structural complexes on one southern side and fortified enclosure in the centre.



Figure 4: Structural complexes on the southern side of the fortified enclosure (rear trench, with bastion). Balathal Structural Phase IIB.

Four structural phases have been identified. Only broken walls of structural Phases I and IV have been exposed whereas Phases II and III are relatively well represented. Structural Phase II is the most prosperous at Balathal, possibly because of the establishment of close contact with the Harappans in Gujarat in the mid-second millennium BC. A number of structures of this structural phase exposed at Balathal demonstrate that a modicum of planning was adopted at the site around 2400 BC, possibly as a result of contact with Harappans. Three structure complexes of stone and mud brick have been exposed, of which two lie on either side of a main street running in a north-south direction. The third complex, close to the southern periphery of the settlement, is separated from the second complex by a small

lane. The street is 4.80 m wide, three times wider than the lane (1.60 m).

The complex located to the east of the street is the biggest; it consists of a number of rooms, eleven of which have been exposed so far. The peripheral wall, particularly on the western side, is quite thick (average thickness 90 cm) and made of stones set in mud mortar. The rooms of varied dimension, either rectangular, square or rhomboidal in shape, were meant for purposes such as storage and cooking. Two of the rooms (10A and 10F) have domestic hearths in them. Five rooms (10B, 10C, 10D, 10H and 10J) may have been used for storage. This inference is based on the size and shape of the rooms and their contents, such as clay bins, storage jars and circular stone-topped clay platforms and

silos. One of the rooms (10K) may have been for dwelling purposes as it has a well-made floor. Room 10E of the complex can be identified as a kitchen as it contained two domestic hearths, each represented by three stones placed in a triangular fashion. By these hearths were found charred bones and grey ware globular pots with soot on their bases. The inner walls which divide the complex into different rooms are thin (average thickness 60 cm) and made of either stone, mud or mud bricks. This is the largest and richest complex exposed so far.

The other complex, located on the western side of the street, is a hall-like structure, roughly squarish in plan. Its northern part is not yet exposed. The complex has a stone foundation and mud brick walls. The eastern part has storage and cooking facilities in the form of a domestic hearth, a saddle quern and storage pits. The function of the rest of the complex cannot be determined structures of later phases.

The third complex, located near the southern periphery of the mound, consists of three structures inside an enclosure wall of mud-bricks over a stone foundation. Of the three structures, the one located to the east is a mud brick rectangular room with rounded corners. Possibly this was a kitchen as it contains a large, circular fireplace. The middle structure is of stone, with walls on three sides and open to the south, with a well-made floor. The third structure, located immediately to the west of the middle structure, is a circular hut with a sunken floor. Possibly this was the storage place for the complex. This structural complex, the poorest of the three in terms of construction, possibly belonged to an economically poor unit of society.

Architectural remains of structural Phase III lack evidence for structural complexes like those of Phase II. On the southern side, on top of the structures of Phase II, were located either single or double-roomed residential structures of Phase III. On the western side of the settlement was a pottery kiln, rectangular in plan and enclosed by mud or mud-brick walls. Within the kiln were noticed a number of circular clay containers of varied dimensions. One more pottery kiln found in the same location but slightly later in age (belonging to structural Phase IV) suggests hereditary succession within the craft.

The Balathal Outer Fortification

On the eastern periphery of the mound at Balathal has been exposed part of an outer fortification wall made of stones set in mud mortar (Figure 5). The wall was possibly constructed in two phases. The lower 1.15 m portion of the wall, which tapers upwards, represents the first phase. The wall is perfectly vertical to a height of 85 cm. On top are traces of mud brick construction.

The overall development within Balathal from Chalcolithic Phase A to B is attributed to the establishment

of close trading contacts with the Harappans of Gujarat around 2500 BC. Evidence for this includes the nature of the outer fortification, the inner fortified enclosure, the well-planned settlement with multi-roomed buildings complexes on either side of a street (like those uncovered at the Harappan sites of Kuntasi and Rojdi, both in Rajkot District of Saurashtra), and the constructional methods. All bear a lot of similarities with Harappan architecture and technology. As at Balathal, Harappan citadels were built around mud-brick platforms and their fortification walls broaden towards their bases. Such features are completely absent in the earlier phase at Balathal.

The other evidence suggesting Harappan influence at Balathal is the presence of classical tan ware, which is similar to the Harappan red ware found in Gujarat. The tan ware found associated with Phase B resembles Harappan red ware in terms of techniques of manufacture, fabric, firing and vessel forms. The only difference is that the Harappan red ware is treated with a bright red slip and bears painted decorations in black pigment, whereas the tan ware produced by the Chalcolithic farmers is tan in colour and devoid of painted decoration.

Numerous copper objects such as razor blades, knives, chisels, arrowheads, spearheads and axes recovered from a number of sites are typologically similar to those found in the Harappan (Figure 6). The Harappans could have developed contacts with these people to obtain copper ores as some sites are very close to deposits of copper. The other possibility is that the Harappans imported finished copper goods from sites like Ahar, which has been identified as a centre of copper working (Sankalia 1969). The early farming communities of central India possibly obtained conch shells from Saurashtra in exchange. Besides, there must also have been exchange involving grain, semi-precious stones, timber and other essential commodities.

The Harappans developed very strong international trade with Mesopotamia and the Persian Gulf. To fulfil export demand they must have required a steady flow of raw materials and finished goods, some of which could have been supplied by the Chalcolithic communities of the Deccan and central India.

Another reason for the increasing prosperity in Phase B at Balathal is the change in social organisation. Studies carried out by the author (Shinde 1991) and others (Dhavalikar *et al.* 1988; Sinha 1998) demonstrate the emergence of a chiefdom level of society around 2500 BC in central India and around 2000 BC in the Deccan. Such evidence comes from Inamgaon, Daimabad (in the Deccan), Navdatoli, Nagda, Eran and Balathal. The presence of a site hierarchy, well-developed craft specialisation, a house and burial of a chief at Inamgaon, together with a fortification ditch, public granary and artificial irrigation channel, and a

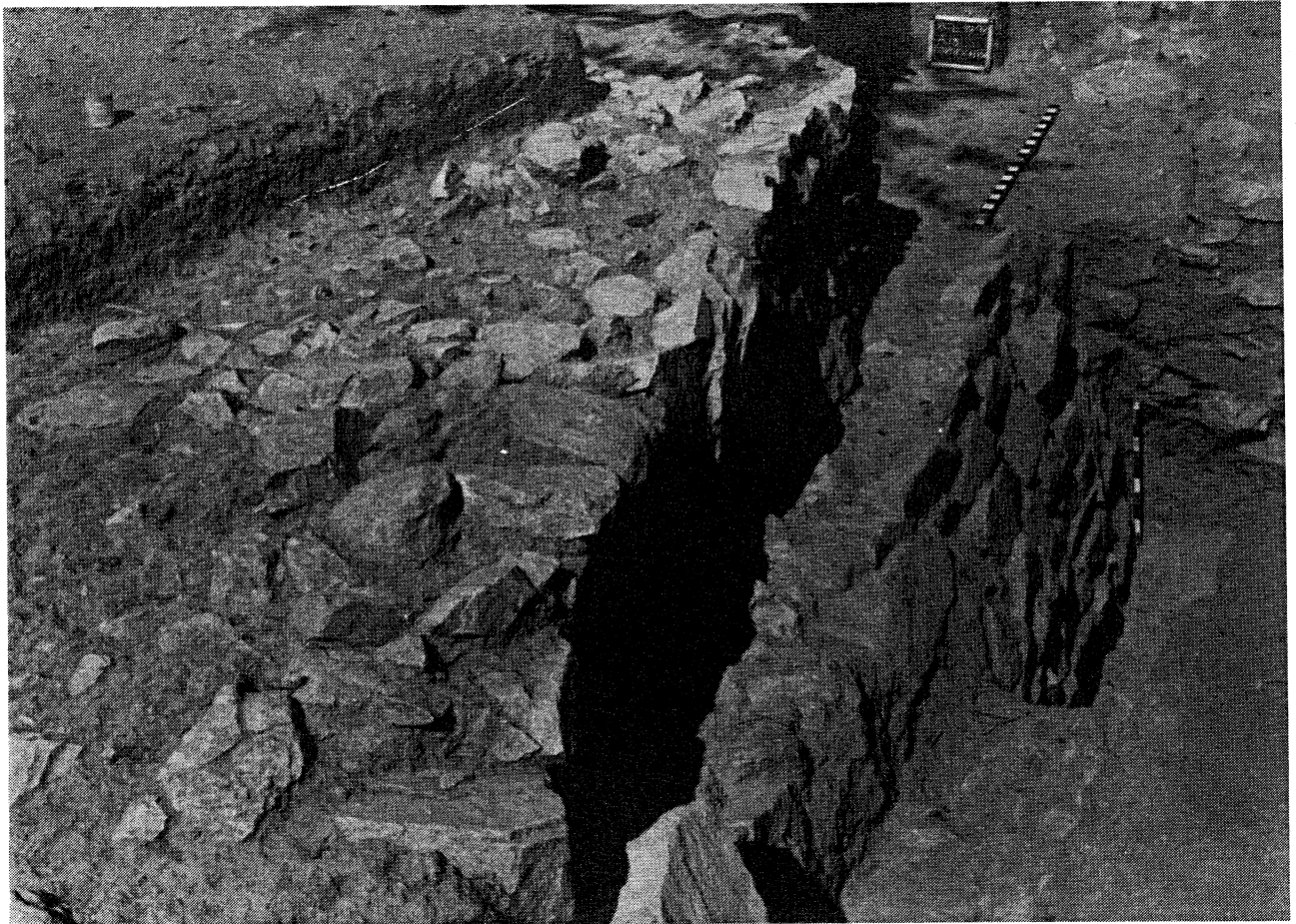


Figure 5: Part of the Balathal outer fortification. Structural Phase IIB.

well-established hinterland trade network, all testify to the existence of a chiefdom society in the Chalcolithic (Shinde 1991).

CONCLUDING REMARKS

From the foregoing discussion, cultural developments in western India from the beginning of the third millennium to the end of second millennium BC become conspicuous. With its congenial climate and black cotton soil, the entire region was covered in Mesolithic times with thick vegetation and plentiful game. This favourable condition appears to have been responsible for an increase in size of the hunter-gatherer population and the seeds of sedentary life were sown. The origins of the Chalcolithic culture must have been independent of the Harappan, as the evidence from Balathal suggests. But the Chalcolithic culture of central India later flourished due to the establishment of close contacts with the Harappans. The creation by the Chalcolithic people at Balathal of monumental and complex buildings, the presence

of tan ware and Harappan-like copper objects, may all have been the result of such contact.

Most probably, the fluctuating climatic conditions after 1600 BC were responsible to a certain extent for the decline of the Chalcolithic culture. We are still looking for evidence to explain this decline and to tell us what happened to the Chalcolithic people after 1000 BC.

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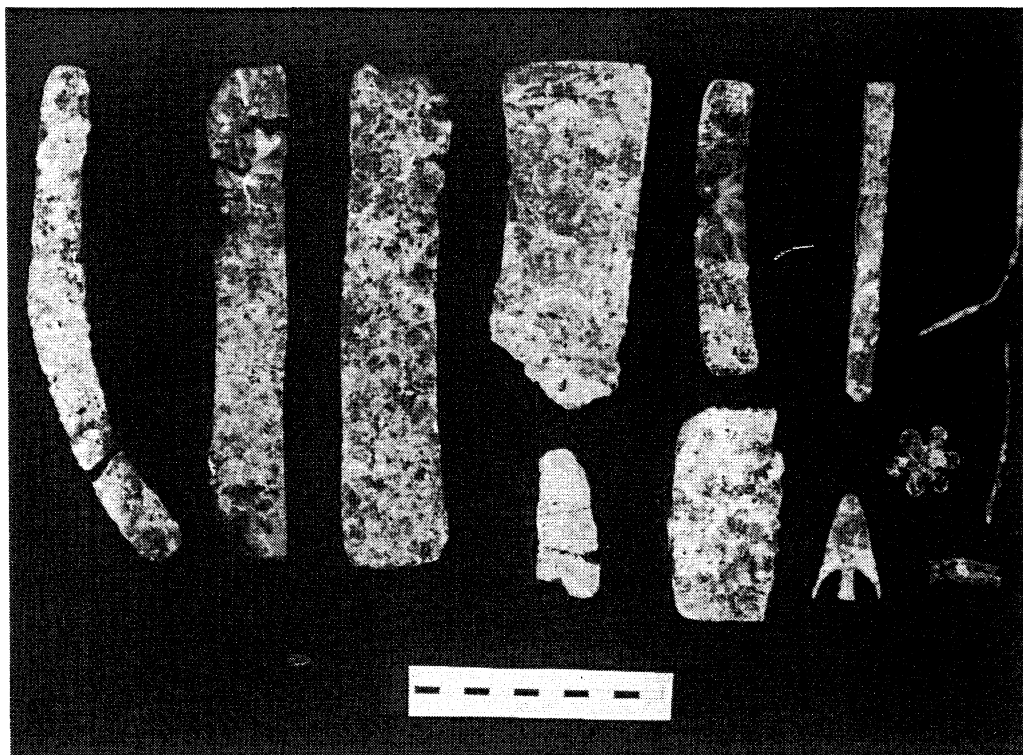


Figure 6: Chalcolithic copper tools from Balathal bearing typological similarities with Harappan contemporaries.

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SHINDE: THE ORIGIN AND DEVELOPMENT OF THE CHALCOLITHIC IN CENTRAL INDIA

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