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WESTERN INDIAN (MEWAR) CHALCOLITHIC BEADS WITH SPECIAL REFERENCE TO BALATHAL

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During the last few years, Indian archaeologists have concentrated their efforts on the investigation of sites of the 3rd to 2nd millennia B.C. in the Mewar region of western India. Unfortunately, most of the excavations have been focused on understanding the cultural sequence, settlement patterns, architecture, and pottery at the sites and have neglected the study of such important artifact categories as beads. As no final reports have been published and the excavations have been carried out by different agencies, reconstructing the bead culture of this area is very difficult. We know quite a bit about the beads of the urban Harappans but know practically nothing about those used by the contemporary rural Chalcolithic people. This paper discusses the beads recovered from a number of Chalcolithic sites, with emphasis on the oldest village in India—Balathal.

INTRODUCTION

The Mewar region in Rajasthan is bounded by the Aravalli Range to the north, north Gujarat to the south and west, and the Malwa plateau to the east. This is one of the prime zones of the development of cultural evolution in India. The research potential of the region was recognized when V.N. Misra carried out extensive surveys in the region in the 1960s and discovered archaeological sites of various cultural periods (Misra 1967). Since then a number of Protohistoric sites have been discovered there. With the discovery of Chalcolithic cultures of a later date, scholars categorized them as a degenerate form of the Harappan culture due to the lack of magnificence in their cultural patterns and some saw this as a result of the migration of the Harappans. Many, however, are of the opinion that the Chalcolithic cultures in Mewar evolved indigenously from already existing Mesolithic and Neolithic cultures.

THE CHALCOLITHIC CULTURE IN MEWAR

Excavations and new C^{14} dates have revealed the contemporaneity of Chalcolithic cultures with the Early, Mature, and Late Harappan periods, as well as the Mesolithic period. A coexistence of urban and rural life with luxury and utilitarian items, respectively, in those days is not surprising, as even in the present day both urban and rural people live together and know each other, yet their material cultures differ substantially. As far as beads are concerned, the bead center at Khambat has been exploited by the urban and rich since Harappan times whereas the Chalcolithic people produced their own stone beads of comparatively poor quality. Nevertheless, a few beads were obtained from the Harappans by higher-class people.

The term "Chalcolithic" is derived from chalco (copper) and lithic (stone) denoting the use of both materials with the former on a restricted scale. Having a limited knowledge of copper, these cultures developed a long, slender, lithic blade industry from the short, thick blades of Mesolithic times and these helped in the production of drills for beadmaking.

There are essentially two separate Chalcolithic cultures in Rajasthan. The first is the Ahar culture which inhabited the Banas river system. The second is the Ganeshwar-Jodhpura culture which was first identified at the site of Ganeshwar (Chakravarty and Srivastava 1985:147-149). Of the two, the latter culture was the more advanced. Both these cultural groups, Ahar (masters of black-and-red ware) in the southeast and Ganeswar-Jodhpura (copper rich) in the northeast, as well as the Pre/Early and Mature Harappans to the northwest and north of Mewar and groups of Mesolithic hunter-gatherers throughout the region, traded with each other, most notably for copper and products such as pottery and beads.

Ahar Culture

The Ahar culture, also known as the Banas culture, derives its name from the site of Ahar, located on the outskirts of the city of Udaipur, where the culture was first identified (Sankalia et al. 1969). Since then 111 sites of this culture have been discovered and almost all are located in

Mewar. Their distribution within the district is as follows: Chittaurgarh - 41; Bhilwara - 24; Udaipur - 25; Dungarpur - 6; Tonk - 5; Ajmer - 4; Jaipur - 4; and Dhaulpur - 2 (Misra 2007). By the 3rd millennium B.C., this culture had spread over a large area of Rajasthan and Madhya Pradesh from Ahar in the east to Iran in the west, and from Ajmer in the north to Navadatoli in the south. Five sites of this culture, namely **Ahar** (IAR 1954-1955, 1955-1956, 1961-1962; Sankalia and Ansari 1969), **Gilund** (IAR 1959-1960:41-46; Possehl et al. 2004; Shinde and Possehl 2005; Shinde et al. 2005), **Balathal** (Misra 1997; Misra and Mohanty 2001; Misra et al. 1995, 1997), **Marmi** (Misra et al. 1993), and **Ojiyana** (IAR 1984-1985:68; Meena and Tripathi 2000, 2000-2001, 2001-2002a, 2001-2002b), have been excavated to varying degrees (Fig. 1). They can be characterized as chiefdom societies, which generally constructed either

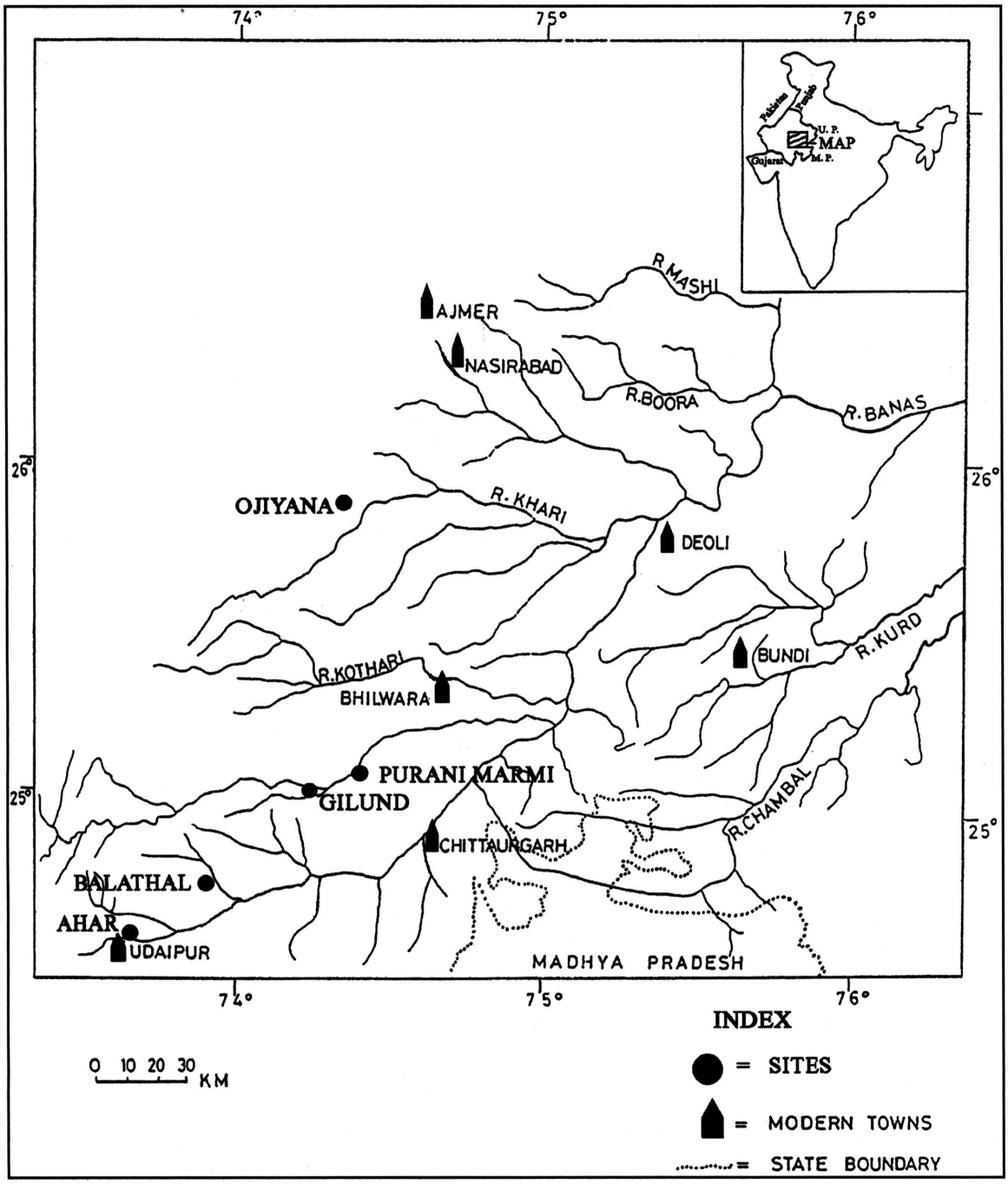

Figure 1. The location of the discussed Ahar sites in western India (drawing: A.K. Kanungo).

rectangular or round mud-brick or wattle-and-daub houses and had various types of public architecture. The excavations have provided a complete cultural sequence for the region and thrown light on its various aspects including socio-economic organization, trade, and contacts. Culturally the assemblage includes painted wheel-thrown ceramic traditions, a specialized blade/flake industry, limited use of copper, and subsistence based on farming, stock-raising, pastoralism, and limited hunting.

Prior to the excavations at Balathal, it was thought on the basis of data from Inamgaon, Navdatoli, Kayatha, and other sites that the Harappans played an important role in the origin and development of village-based agricultural communities of the Ahar-Banas Chalcolithic complex and the Central Indian Chalcolithic. Excavations at Chalcolithic sites in the Deccan and Central regions, however, provided evidence for already well-established settlements rather than the gradual development of village life. There was a rather abrupt introduction of pottery, copper, and ornament-manufacturing technologies (Shinde and Posshel 2005:295). The exploration of the five Ahar sites mentioned above revealed that a distinctive regional Chalcolithic culture had developed in the Mewar region during the latter half of the 3rd millennium B.C. (Fig. 2).

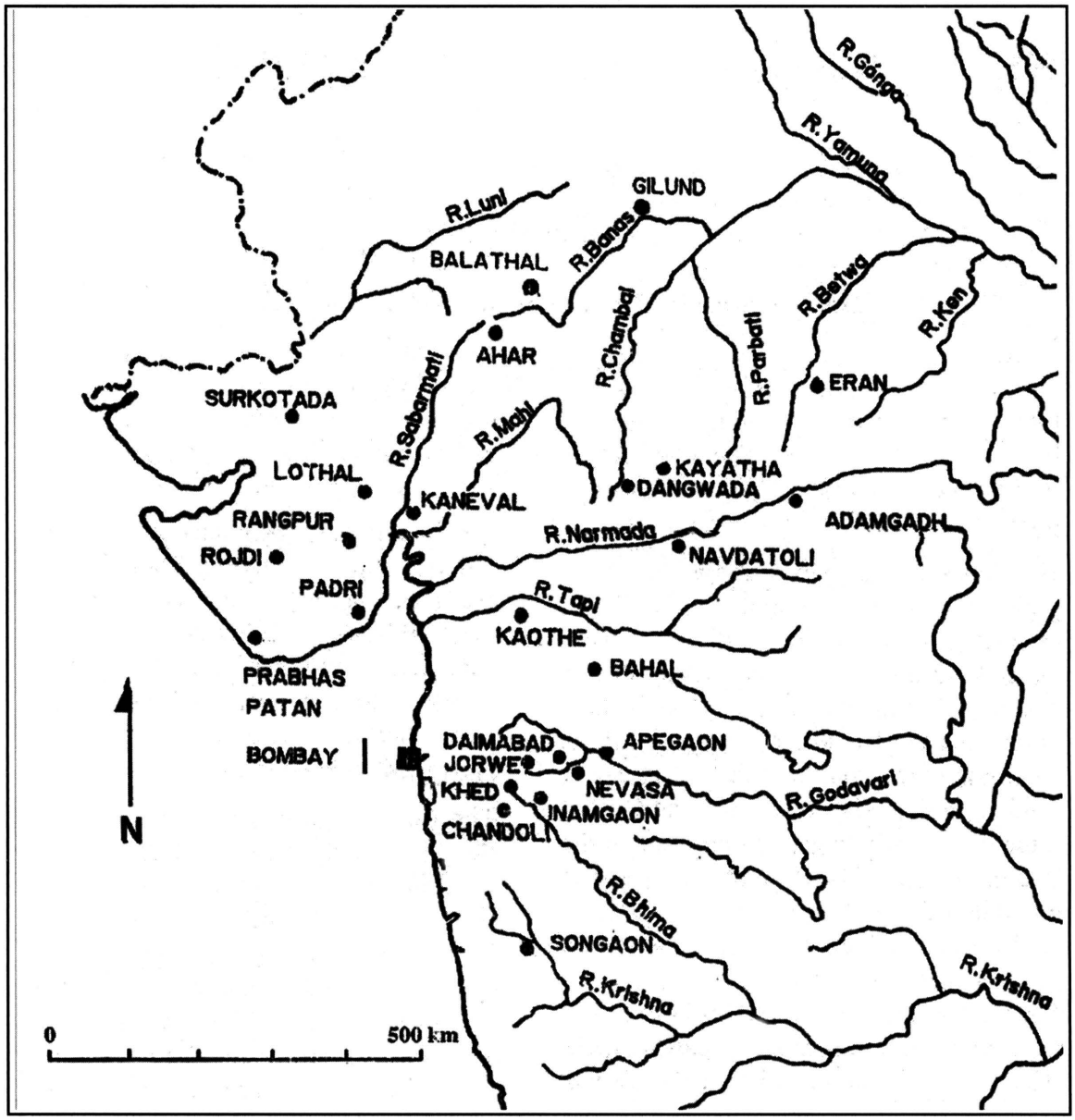

Figure 2. Important Chalcolithic sites in central and western India (drawing: A.K. Kanungo).

The sites of the Chalcolithic Ahar culture may be divided into three phases: Early (3000-2500 B.C.), which saw the rise of the culture; Mature (2500-2000 B.C.), during which it was at its peak in terms of development, and Late (2000-1500 B.C.), when it declined and collapsed (Possehl et al. 2004)(Table 1).

Sites of the Ahar Culture

The site of **Ahar** (500 x 275 m with a 12.8-m-thick deposit) was first excavated on a limited scale by the Department of Archaeology, Rajasthan, in 1954-1956, and then by Deccan College in 1961-1962 (Sankalia et al. 1969). Being in the vicinity of the extensive copper deposits of the Aravalli Range, Ahar is presumed to be one of the primary centers where agriculture and copper working played an important role (Hooja 1988; Kashyap 1999; Sankalia et al. 1969). The people practiced animal husbandry and cultivated rice. The occupation of the site has been divided into Period I (Chalcolithic) with three sub-phases (Ia, Ib, and Ic), and Period II (Iron Age). Although there is no sterile layer separating the two periods, chronologically there is a gap.

Ahar is identified as a copper-smelting and tool-manufacturing site based on the finding of copper slag and implements such as celts, blades, knives, rings, bangles, and kohl sticks derived from local copper ore. Also present are terra-cotta animal figurines including bulls, elephants, and a horse, most of which belong to sub-phases Ib and Ic. There are also shell bangles and beads of steatite, shell, crystal, terra cotta, and lapis lazuli. Most of the terra-cotta beads[1] range from biconical to oblate forms and many of them bear incised decorative patterns, eight of which are identical to those found in western Asia (Fig. 3).

An interesting find at Ahar associated with Phase Ib is a tiny terra-cotta container with rope decoration around the body which contained 11 beads (Fig. 4). Of these, five were of faience, four of shell, and one each of agate and carnelian (Sankalia et al. 1969:163). Glass beads have also been recovered at Ahar but their age is uncertain. The excavator identified them as Early Historic: "Glass, though technically reported from the horizons of phase IC, has to be assigned to period II as the topmost horizons of the former were very much disturbed due to pits" (Sankalia et al. 1969:163). If, however, the beads do belong to the Chalcolithic phase, the antiquity of glass in the region can be pushed back by a thousand years, but only further research will resolve this.

Gilund (25° 01' 56" N and 74° 15' 45" E) is located on the right bank of the Banas River roughly 100 km to the northeast of the city of Udaipur in the Rajsamand district and was excavated by the Archaeological Survey of India in 1959-1960 (IAR 1959-60:41-46) and again by Deccan College and Pennsylvania University from 1999-2004 (Possehl et al. 2004; Shinde and Possehl 2005; Shinde et al. 2005). This is the largest site of the Ahar culture being about 10 hectares in extent with two prominent mounds. The eastern one is 15 m high while the one to the west is 8 m high. The site has been identified as an important center of the Ahar culture in both economic and political terms

Table 1. Chronology at Ahar, Balathal, and Gilund (*after* Sinha 2003).

Ahar (Hooja 1988)		**Balathal (Misra 2001)**		**Gilund (Possehl and Shinde 2004: 20; Shinde et al. 2005)**	
Chalcolithic					
Period	Date (B.C.)	Period	Date (B.C.)	Period	Date (B.C.)
Ia	2580-2170	IA	3000-2500	I Early	3000-2500
Ib	2170-2080	I Middle	2500-2000		
Ic	2080-1500	I Late	2000-1700		
Stratigraphic Break					
Early Historic					
II	6th c. B.C.+	II	3rd c. B.C. - 1st c. A.D.	II	Early Historic (Sunga/Kushana)
Stratigraphic Break					
	Late Medieval			III	Medieval

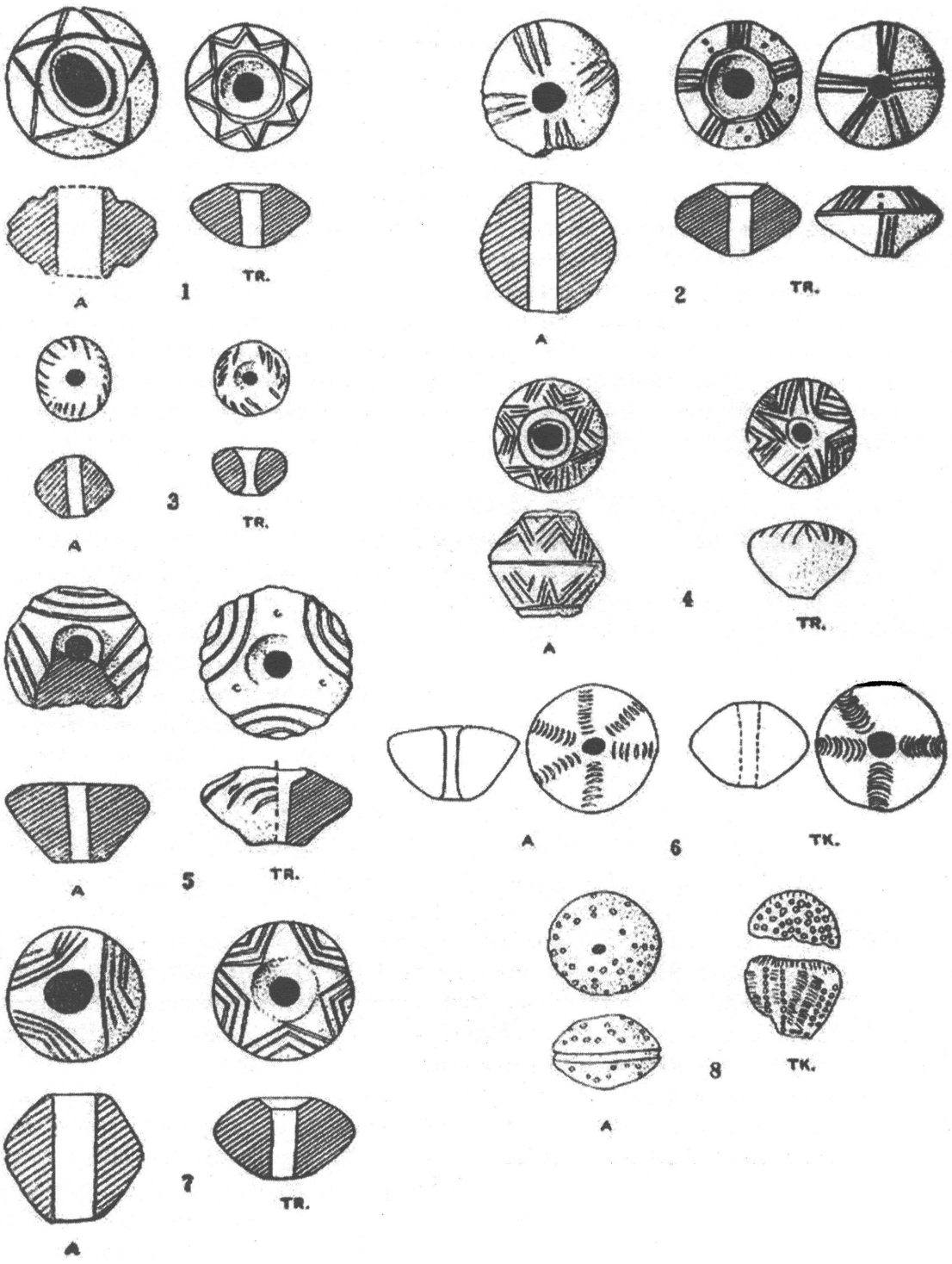

Figure 3. Incised terra-cotta beads or spindle whorls from Ahar (A); Troy, Turkey (TR); and Anau, Turkmenistan (TK) (*after* Sankalia et al. 1969).

with impressive mud-brick public architecture and separate mud/mud-brick fortifications. Artifacts from many far-flung regions have been found here testifying to the extensive trade contacts of these people. There is also evidence of graffiti with affinities to Harappan script. The excavations have provided excellent evidence of granaries and silos, the

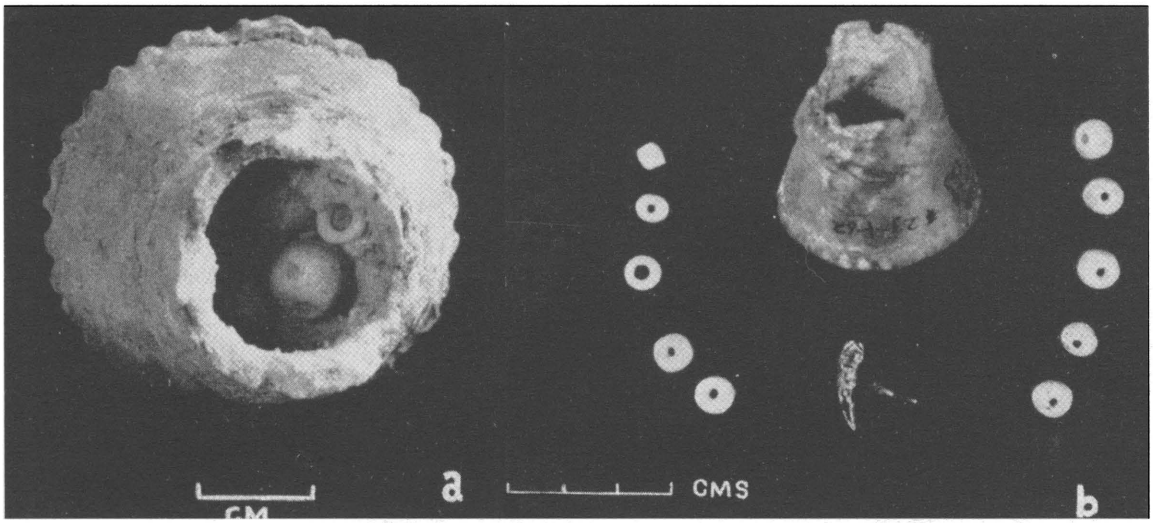

Figure 4. Tiny terra-cotta container and the beads found in it at Ahar (*after* Sankalia et al. 1969).

first use of kiln-burnt brick by the Chalcolithic people, a cart track, and terra-cotta seals, suggesting contact with Sind, Baluchistan, and the Bactria-Margianna Archaeological Complex (BMAC) of Afghanistan and Central Asia.

The presence of a carnelian-bead workshop at the site was hypothesized with the discovery of a large quantity of agate/carnelian beads (Pl. VB, left) and beadmaking debitage scattered in the level dated to the mid-3rd millennium B.C. (V. Shinde 2008: pers. comm.). This blossoming craft must have depended on north Gujarat for the raw materials (DasGupta 2006:73). Other important finds are the biconical to oblate terra-cotta beads (Pl. VIA) which have the same incised decorative patterns as the ones from Ahar and are related to those from western Asia. At least seven beads from the Mature phase of Chalcolithic Gilund have incised designs that are identical to those on the Ahar beads. The finding of two turquoise beads (Pl. VB, right) associated with the Mature Chalcolithic phase provides additional evidence for contact with western Asia.

The **Ojiyana** (25° 53' N; 74° 21' E) village is located about 30 km southwest of Beawar and 11 km north of Badnor, on the Beawar-Bhilwara road. This ancient site lies on the slope of a small hill situated to the northwest of the present village. It was excavated by the Archaeological Survey of India for two seasons during 1999-2001 (Meena and Tripathi 2000, 2000-2001, 2001-2002a, 2001-2002b). The strategic location of the site and the recovered artifacts reveal that Ojiyana played an important role in the hinterland trade with other contemporary Chalcolithic communities. The 7.5-m-thick cultural deposit is divided into three phases based on the pottery and structural evidence. The finds include a large number of steatite beads, as well as beads of shell, bone, faience, terra cotta, carnelian, and agate (Pl. VIB). Other ornaments and pieces of copper are also present. The carnelian, agate, and limestone beads may be imports as these materials are not available locally. Surprisingly, no quartz beads were found though the raw material is available in abundance. Perhaps beads were not produced at this site.

Steatite beads by far outnumber those of all other materials, suggesting they were a popular ornament among the inhabitants (Meena and Tripahti 2001-2002b). The common forms are micro beads, globular specimens, and thin and thick discs.

Many of the incised designs on the terra-cotta beads are identical to those found at Ahar and Gilund (**Fig. 5**). Another interesting discovery is a big decorated bead of faience (Pl. VIIA, top), identical examples of which were found at Harappa and Mohenjo-daro. The presence of this Harappan bead at an Ahar culture site suggests that these two contemporary cultures had some degree of interaction.

The large and elevated mound of **Marmi** (25° 6' N; 74° 25' E) is about 18 km up the Banas river (northeast) from Gilund and is located 500 m east of the village of Marmi in the Rasin Tehsil sub-division of the Chitorgarh District. Excavation has produced hundreds of terra-cotta bull figurines of the Chalcolithic period (Misra et al. 1993). Two short cylindrical beads of shell and two globular beads of terra cotta were found on the southern slope of the mound. Their similarity with beads from other Chalcolithic sites in Rajasthan and Madhya Pradesh suggests that they probably belong to the Chalcolithic period.

The site of **Balathal** (24° 43' N; 73° 59' E), is located 30 km south of Gilund, in the Udaipur District, and was first

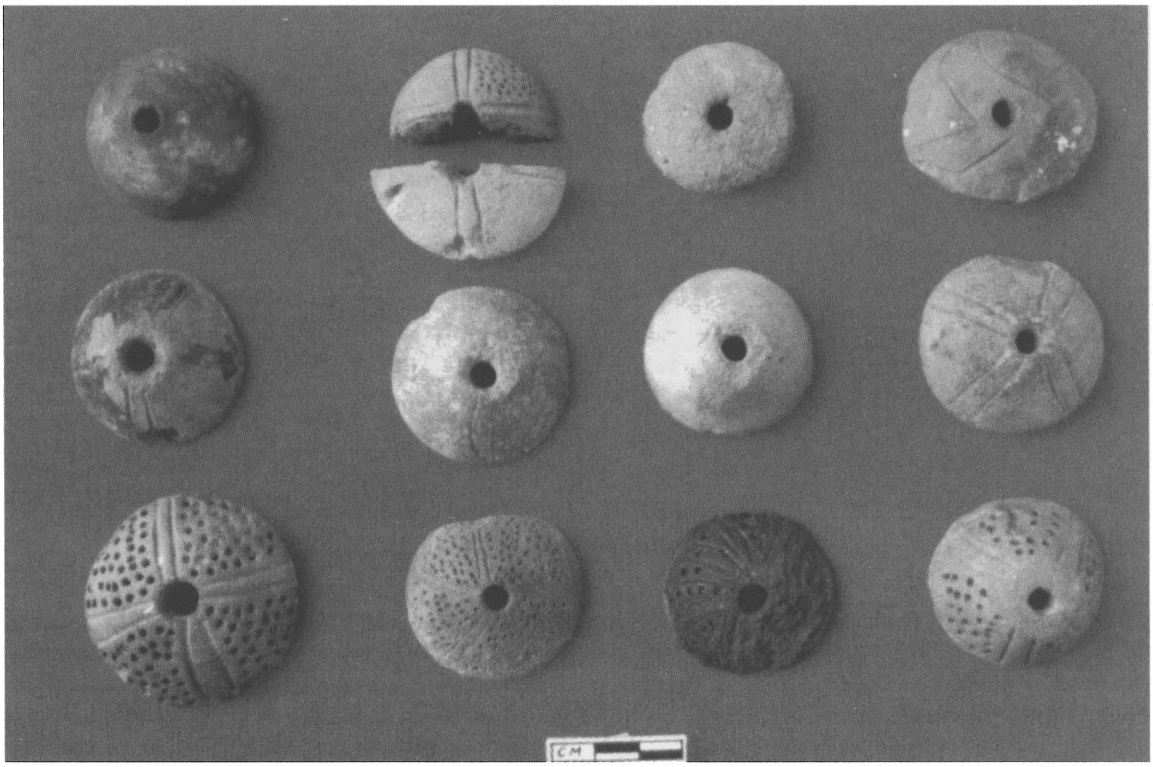

Figure 5. Incised terra-cotta beads/spindle whorls from Ojiyana (*after* Meena and Tripathi 2002b).

discovered by V.N. Misra (1967). The site was subsequently visited by R. Hooja (1988). Balathal was excavated by Deccan College and the Institute of Rajasthan Studies between 1993 and 2000 on a large scale with a view to reconstructing the socioeconomic organization of the early farmers of this region.

The site covers an area of 2 ha (150 m N-S by 135 m E-W) and the cultural deposit is 7 m thick. The deposit is divisible into two cultural periods: Chalcolithic (the lower 4.5 m dating to 2800-1800 B.C.) and Early Historic (the upper 1.5 m dating to 300 B.C.-A.D. 100). There was a hiatus between the occupations which is represented by a sterile dark grey layer about 1.0 m thick. The Chalcolithic period itself has been divided into two phases. Phase A is represented by the lower 1.0-1.5 m of the deposit and Phase B by the upper 3.0-3.5 m of the deposit in the different trenches.

A total of 23 layers were recorded at Balathal. Layers 6 to 23 belong to the Chalcolithic period and layers 1 to 4 to the Early Historic. Layer 5 is sterile. Layer 4 consists of a deposit of white ash 20-25 cm thick which was probably produced by the Early Historic people burning off the vegetation growing on the deserted site before they settled on it. This layer too is virtually sterile and the limited amount of potsherds and other objects found in it may be intrusive from Layer 3 (Misra 1997, 2001, 2005).

The excavations at Balathal have pushed the Ahar culture back to 3000 B.C., making it contemporary with the Pre/Early Harappans of Rajasthan and Gujarat. They have revealed that during Phase A there existed an early peasant farming community with an indigenously developed, organized village life. The presence of non-local copper objects, steatite beads, and ceramics does, however, reflect the presence of some degree of cultural contact with more developed communities like the Harappan and Ganeswar people. Hence, while the sedentary settlement pattern and agriculture were probably home grown, the technology to some extent was borrowed. The subsequent leap in development around 2500 B.C. was thus probably a result of interaction with the Harappans, which affected all aspects of life including agriculture, technology, architecture, social organization, and local developments in Phase B.

Of the 30 C^{14} dates from the Chalcolithic levels, 25 are fairly homogenous and stratigraphically reasonably consistent. In their uncalibrated form they range from 3020±90 B.C. to 1810±110 B.C. and in calibrated form from 3700 B.C. to around 1800 B.C. (Misra 2005). Table 2 provides the dates of the Chalcolithic layers, either from the same trench or from a nearby trench in the same row, where beads were found.

Table 2. Dating of the Bead-Producing Chalcolithic Layers at Balathal (selected from Misra 2005).

Lab No.	Trench	Layer	Depth	5570 Error	5730 Error	Calibration 1	Calibration Summary
PRL-2041	D11	6	2.91	3860±60	3970±60 B.P. 2020±60 B.C.	B.C. 2306 B.P. 4254	B.C. 2460-2200 B.P. 4410-4150
BS-1782	D4	7	3.0	3990±120	4110±120 B.P. 2160±120 B.C.	B.C. 2487, 2481,2473 B.P. 4436, 4430, 4422	B.C. 2830-2310 B.P. 4780-4260
BS-1749	R13	8	5.65	4080±150	4200±150 B.P. 2250±150 B.C.	B.C. 2618, 2611, 2596, 2593, 2582 B.P. 4567, 4560, 4545, 4542, 4531	B.C. 2880-2460 B.P. 4830-4410
BS-1586	D2	10	3.73	3790±80	3900±80 B.P. 1950±80 B.C.	B.C. 2202 B.P. 4151	B.C. 2400-2050 B.P. 4350-4000
PRL-1843	HX2	11	2.83	4000±70	4120±70 B.P. 2170±70 B.C.	B.C. 2551, 2541, 2491 B.P. 4500, 4490, 4440	B.C. 2620-2460 B.P. 4570-4410
BS-1747	E4	11	4.05	4830±90	4970±90 B.P. 3020±90 B.C.	B.C. 3641 B.P. 5590	B.C. 3700-3520 B.P. 5650-5470
BS-1802	E4	12	4.8	4210±110	4340±110 B.P. 2390±110 B.C.	B.C. 2877 B.P. 4828	B.C. 2910-2600 B.P. 4860-4550
PRL-1981	OC1	13	NA	2520±80	2600±90 B.P. 650±90 B.C.	B.C. 763, 676, 674 B.P. 2712, 2625, 2623	B.C. 800-410 B.P. 2750-2360
PRL-1846	HX2	14	3.16	4180±60	4310±80 B.P. 2360±80 B.C.	B.C. 2866, 2805, 2781, 2769, 2762, 2717, 2710 B.P. 4815, 4754, 4730, 4718, 4711, 4666, 4659	B.C. 2880-2630 B.P. 4830-4580
PRL-1925	HX2	15	3.8	3700±170	3810±170 B.P. 1860±170 B.C.	B.C. 2129, 2082, 2043 B.P. 4078, 4031, 3992	B.C. 2400-1830 B.P. 4350-3780
PRL-1937	OB	16	2.05	3860±90	3980±90 B.P. 2030±90 B.C.	B.C. 2305 B.P. 4254	B.C. 2470-2150 B.P. 4420-4100
PRL-1928	HX2	18	4.68	4420±180	4550±180 B.P. 2600±180 B.C.	B.C. 2027, 1992, 1982 B.P. 3976, 3941, 3931	B.C. 3360-2880 B.P. 4150-3780

An interesting discovery was made in Layers 8 and 9 of the SE quadrant of Trench R13. About 30 cm to the south of a fireplace, dated to 2880 B.C., a large globular pot was found buried in the floor in a vertical position. Removal of the earth from the pot revealed six smaller pots (Fig. 6). They were meticulously packed, being placed either sideways or upside down. The six vessels clearly constituted a dining set which, being of social importance, was carefully stored inside the large pot. It is significant that one of the vessels was also used for storing steatite disc beads and Job's tears (*Coix* sp.)(Figs. 7-8), both of which are common necklace components. This whole set would appear to be equivalent to a modern-day chest used for storing family valuables (Misra 2001).

The ornaments of the Chalcolithic people at Balathal consisted of necklaces made of beads of carnelian, agate, jasper, steatite, faience, and terra cotta, and bangles of copper, shell, and terra cotta (Misra 1997). Terra-cotta items include round, *arecanut*, barrel, and disc beads, *damaru*-shaped pendants, and ear studs (Misra et al. 1997). A copper pendant shaped like a six-petalled flower (Fig. 9) and a beautifully made polished-bone pendant of similar form (Fig. 10) are notable finds associated with Phase B. The face of the bone pendant has a central perforation, which is surrounding by

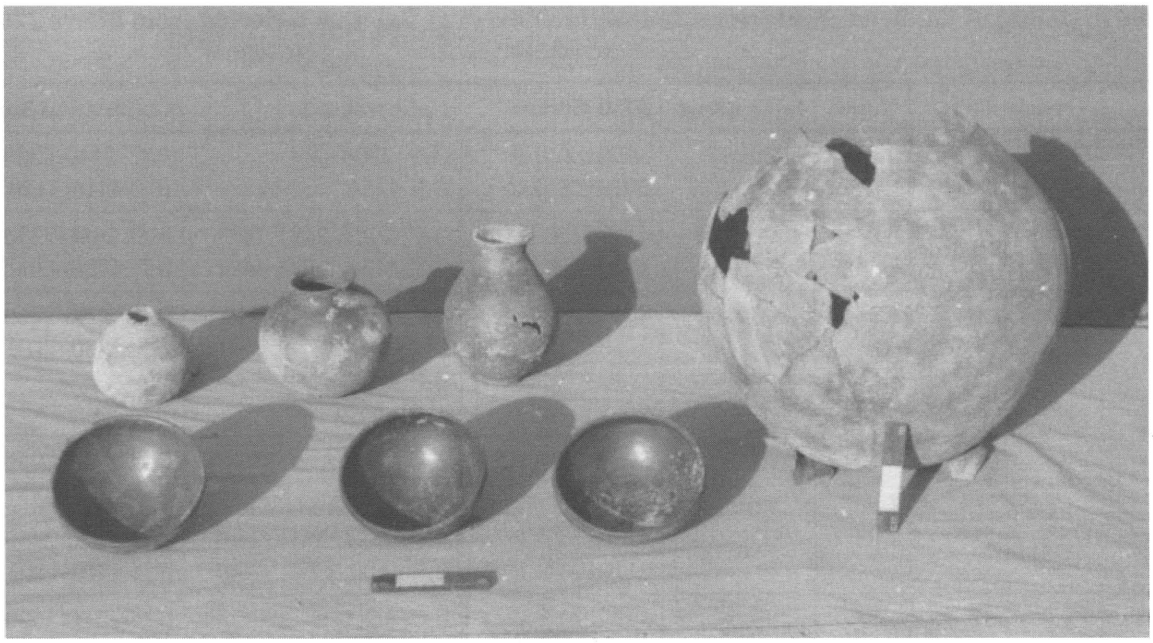

Figure 6. Set of pots found at Balathal (photo: V.N. Misra).

two concentric rows of dot/circle decoration. The circles are symmetrical indicating the use of a circular drill bit. The back side is plain. Although eight glass beads were found in the Chalcolithic level, there is the possibility that they could have intruded from the overlying Early Historic deposit.

Evidence of the disposal of the dead through cremation or burial in regular cemeteries has only been found at Balathal. Five human skeletons were uncovered within the settlement; four from the Chalcolithic deposit and one from the Early Historic. Only burial No. 5 found in Trench D4, Layer 6, 60 cm below the top of the layer, had beads in association. The burial is a woman about 35 years old oriented east-west. She rested on a compact surface made of burnt cow dung with a few small stones placed irregularly on the surface. The head rested on a flat stone which was supported by a smaller stone. A few stones were placed below the left hip and knee area. All the bones were perfectly articulated. Two carnelian beads (fashioned as eye beads) were found in situ on the abdomen. A copper pin was near the right hand.

TECHNOLOGY AND CRAFT AT BALATHAL

A few copper fragments and beads of steatite and semi-precious stones such as carnelian and agate are associated with the early phase of the Ahar tradition at Balathal, revealing the presence of copper smelting as well as tool- and bead-manufacturing technologies right from the beginning of the settlement (Misra et al. 1997). The artifacts are rare, however, and we do not really understand the origin of these crafts and their technologies. It may be that they were borrowed from the more technologically developed Ganeshwar people or the Pre/Early Harappans of North Gujarat and Rajasthan. No definite evidence of bead production at Balathal has been uncovered, though a few unfinished and partially perforated beads suggest that some part of the bead production cycle was taking place at the site. The large quantity of steatite and terra-cotta beads suggests that they are local products; they are a regular feature at most western Indian Chalcolithic sites.

Since the frequency of beads made from such semi-precious stones as carnelian and agate is very low and not

Figure 7. Beads inside one of the Balathal pots (photo: V.N. Misra).

Figure 8. Some steatite and Job's tear beads from the Balathal pot (photo: V.N. Misra).

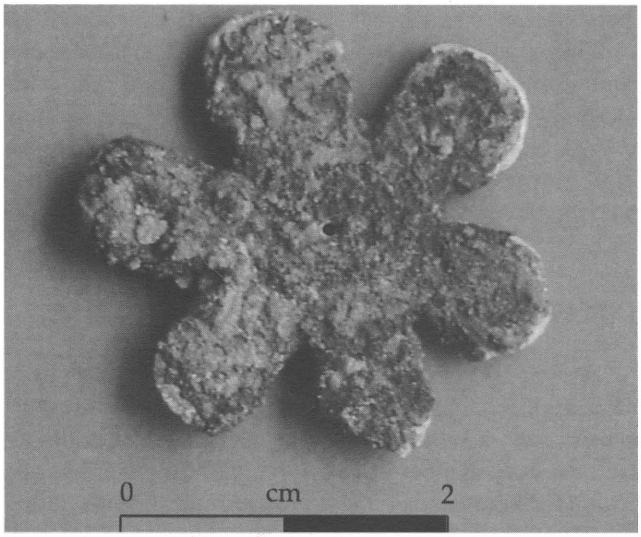

Figure 9. Six-petalled copper pendant from Balathal (photo: A.K. Kanungo).

much has been found to support local manufacture, it is likely that they were obtained through trade with the neighboring cultures, including the Ganeshwar-Jodhpura traditions and other Chalcolithic communities, the Pre/Early Harappans of Gujarat, and the hunting-gathering groups and nomadic pastoralists.

There is definite evidence of commerce between the Ahar people and the Harappans of Gujarat in terms of the flow of marine products such as coral objects (Pl. VIIA, bottom) and conch shell as well as semi-precious stones and beads of carnelian into the Ahar region and the movement of black-and-red ware and copper objects and ingots from the Ganeshwar region into Gujarat via the Ahar region with the hunting-gathering and nomadic pastoral elements acting as intermediaries.

The kind of craft specialization seen at Balathal suggests the presence of a stratified society where people had a surplus economy as well as the desire to obtain and the ability to pay for various commodities, many of which were imported. Many prestigious items such as fine ceramics, copper, and

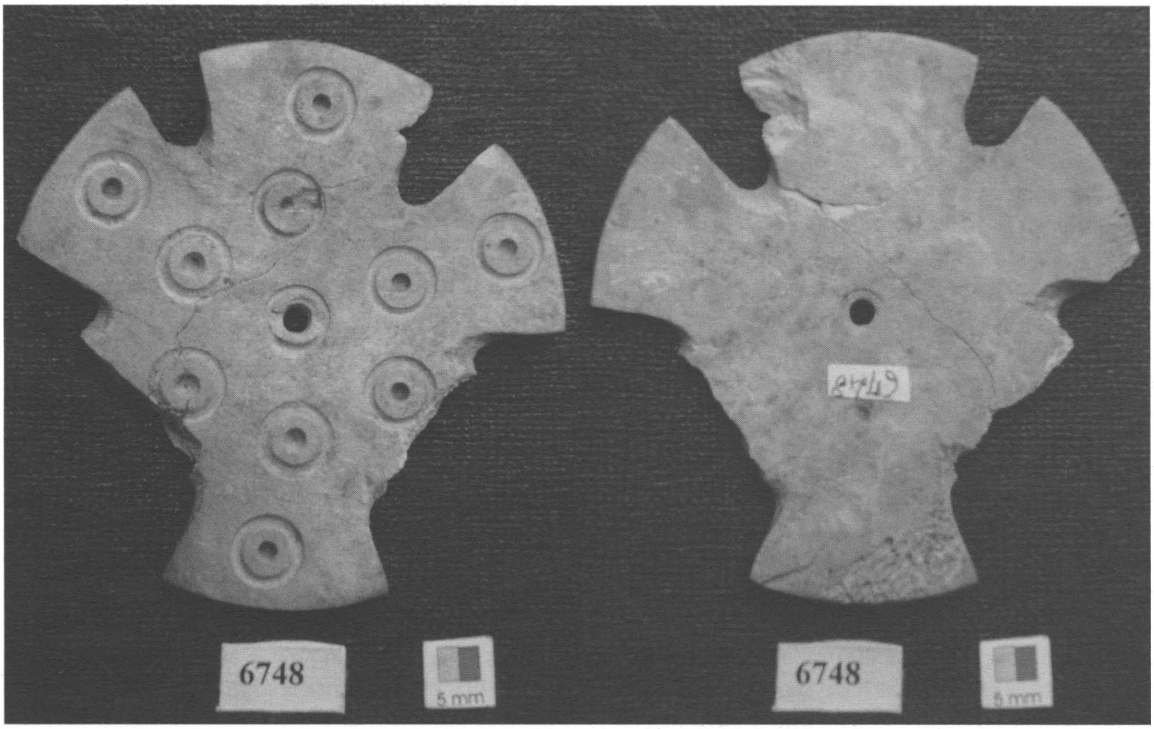

Figure 10. Bone pendant with six projections (two are missing) from Balathal (photo: A.K. Kanungo).

carnelian and jasper beads were luxury items intended for the higher members of the society and clearly indicate social stratification. During the Mature phase, the number of crafts increased and there is a wide variety of artifacts representing many levels of technological ability and social stratification. This is especially true for beads where both common and precious stone were used.

CONCLUSION

Beadmaking was an important industry at most Chalcolithic sites and a variety of beads of semi-precious stones, shell, and terra cotta were manufactured locally. In fact, the large number of beads found at Ahar led Sankalia et al. (1969) to conclude that it was a bead-manufacturing site. While no definite evidence of bead production has been found at Balathal, the presence of a few unfinished and unpolished stone beads at the site suggests that some stage of the bead production cycle was taking place there. A few unfinished beads and the carnelian debitage associated with the phase dated to the mid-3rd millennium B.C. at Gilund indicates probable lapidary work at this site as well.

The most common beads encountered are those made of steatite. They were probably manufactured locally as the Aravalli Range is rich in this material, though it is also possible that it was obtained from the Harappans as they had established industries for the production of steatite beads. Steatite and faience, which are diagnostic of Proto-Historic habitation sites, are scarce at Ahar but plentiful at Balathal, Gilund, and Ojiyana.

After steatite, terra cotta is the next most popular material for beads during all phases of the Proto-Historic period. The incised terra-cotta beads of Ahar and Gilund are so far unique in India. The preference for clay may be due to the fact that forming and baking clay is easier and takes less skill than working stone, and the patterns familiar to the inhabitants could be easily incised on them. Eight of the decorative patterns found on beads from Ahar and seven patterns on specimens from Gilund have similar counterparts on examples from western Asia.

Carnelian, chalcedony, and agate were probably imported from the Gujarat region while shell beads and bangles may either have been imported from there or manufactured locally as Sankalia et al. (1969) has reported shell debitage and shell artifacts in various stages of manufacture at Ahar. Two turquoise beads from the Mature Phase at Gilund throw light on the trade relations of the Ahar people as turquoise is not a local material and comes from Central Asia or Afghanistan and would have reached the site via the Harappans. Similarly, a small tubular lapis lazuli bead of brilliant ultramarine blue found associated with Phase Ic at Ahar is also notable as its nearest source is Afghanistan and it could only have reached the site via trade with the Harappans (Sankalia et al. 1969) or perhaps through intermediaries such as nomadic pastoralists and Mesolithic peoples. It is not possible, however, to generalize on the basis of one or two specimens. The presence of the occasional carnelian bead is also suggestive of trade especially as a Harappan barrel bead has been found at Balathal. Faience beads which were typically manufactured by the Harappans have also been found at Balathal and Gilund.

The semi-precious stones, copper, and shell artifacts represent high-value commodities and were used by the politically and economically richer strata of Ahar society while steatite and terra-cotta beads were used by the common people for ornamenting themselves and probably their animals as is done in the region today.

APPENDIX A. CLASSIFICATION OF THE BEADS AND PENDANTS FROM BALATHAL

A large number of beads, along with a few pendants, came from the Chalcolithic layers at Balathal. Unfortunately, many of them could not be obtained for the present study. What follows is a classification of the beads which were available for study. The beads have been divided into six groups on the basis of material: 1) crystalline stone; 2) cryptocrystalline stone; 3) glass/faience; 4) bone/shell/ivory/coral; 5) terra cotta; and 6) steatite. Their shapes have been identified using parameters set by H.C. Beck (1941: Pl. XI, XII), W.G.N. van der Sleen (1974:34-35, 39, 44-46), and Lois Sherr Dubin (1987:342-43).

Crystalline Stone

Amazonite and quartz comprise this group.

Amazonite

Four amazonite beads were recovered at Balathal (Pl. VIIB); three from Layer 14 and one from Layer 15. Two are disc shaped (#1132 and 9785), one is cylindrical (#4103), and the fourth is barrel shaped (#2431). Nos. 1132 and 4103 are polished but lack perforations. Although no production debitage was uncovered, the unperforated nature of the two specimens suggests that if the whole bead production process was not taking place at the site, at least the drilling was. This is not surprising as in many cultures, the drilling is done at the end-user's place whereas the initial shaping and polishing are performed elsewhere (Kanungo 2006).

Quartz

A very interesting oblate-biconical quartz bead (#2708) was found in Layer 14 (Pl. VIIC). The perforation is oblique and made without the help of a bow drill. The shape, material, and perforation appear to be more representative of the Mesolithic period than the Chalcolithic. This bead might have come to Balathal through contact with Mesolithic peoples from a site like Bagor in the Bhilwara District of Rajasthan where such beads have been found and are believed to have been produced (Kanungo 2005:6; Misra 1973).

Cryptocrystalline Stone

This group includes agate, chert, carnelian, and jasper (Pl. VIIC). The carnelian beads are further divided into two groups: etched and plain.

Chert

A single unpolished chert bead was found in Layer 13. It is spherical (#3955) and the perforation is drilled from both ends.

Agate

Agate is represented by a single barrel-shaped specimen (#8106) from Layer 14. The hourglass perforation was drilled from both ends. One end is broken.

Jasper

There are four jasper beads, three from Layer 14 (#1106, 8360, and 4878) and one from Layer 17 (#1918). Two of the Layer 14 beads are barrel shaped (#1106 and 4878) while the third is a beautiful multifaceted specimen (#8360). The bead from Layer 17 is barrel shaped with a mottled surface (#1918). Both ends of bead #1106 are flattened.

Carnelian

Eight carnelian beads and one bead rough-out are in the collection (Pl. VIIIA). Of these, seven are plain and one is etched. One bead each was found in Layers 6 and 11, three in Layer 14, two in Layer 16, and one in Layer 17. The rough-out is from Layer 15. The perforations are generally hourglass shaped and drilled from both ends.

The bead from Layer 6 is biconical and broken at one end (#6080). As the broken part is well polished, the bead appears to have been used for a long time after breakage, revealing how precious such beads were to the Balathal people.

The specimen from Layer 11 is a plain bicone (#9143). Of the four beads from Layer 15, one is disc shaped and drilled from one end (#4022). Another, with a broken end, is cylindrical with three visible etched lines (#2463). The third specimen is a faceted short bicone (#4597), while the fourth is an unperforated and unpolished rough-out (#8861). The latter specimen suggests that some aspect of beadmaking was performed at Balathal.

Both beads from Layer 16 are spherical. The ends of one specimen are flattened giving it an oblate appearance (#1305). The other bead (#1101) is drilled from one end. The bead from Layer 17 is a biconical disc (#4961).

Glass and Faience

Since both of these materials—glass and faience—are man made, require heating in their manufacture, and are made of similar siliceous raw materials, they have been grouped together.

Glass

Eight glass beads were recovered from the Chalcolithic levels at Balathal (Pl. VIIIB). Though many of them appear to be from the sloping portion of the mound or from trenches in which there was disturbance with the possibility of intrusion of artifacts from the upper Early Historic deposits, there are a few beads which came from undisturbed Chalcolithic contexts. Layer 6 yielded two beads. One is cylindrical, reddish maroon in color with numerous elongated linear bubbles and a rough surface (#6466). The other is spherical and dark brown in color. Layer 11 contained a typical furnace-wound black spherical bead (#3883). Layer 13, which is indeed mixed with Layer 5 material, yielded two disc-shaped beads, one black (#3660), the other red (#4353). Layer 13 also produced two orange-colored disc-shaped beads (#3029 and 3704) identified in the field as being composed of "paste." Layer 14 contained a reddish-brown spherical bead (#2777). Layer 16 produced two black spherical beads. One is micro (#2081); the other displays typical wind marks (#2201).

Although the beads came from the Chalcolithic level, the excavator, Prof. V.N. Misra, feels that there is a possibility that they could have intruded from the overlying Early

Historic deposit. Furthermore, Prof. Jonathan M. Kenoyer (2008: pers. comm.), an expert on ancient Indian beads, feels that most of the specimens look like Early Historic beads. The same possibility applies to Ahar where a few glass beads were also found in the Chalcolithic level but the excavator felt that they could have percolated down from the Early Historic deposits (Sankalia et al. 1969:163).

Faience

The Chalcolithic levels at Balathal produced seven faience beads or fragments thereof (Fig. 11). There are two globular specimens, one from Layer 6 and another from Layer 7 (#6677). The rest are all tubular and very delicate and friable. One came from Layer 15, two from Layer 16, and two from Layer 17.

Bone, Ivory, Shell, and Coral

Beads of bone, ivory, shell, and coral are represented by 16 specimens (Pl. IXA).

Bone

There are two bone specimens. Found in Layer 10, one is a beautifully polished long drop pendant with a perforation at the large end drilled from one side (#529). The other, from Layer 13, is a cylinder disk (#2982) that has split in two.

Ivory

Of the two ivory beads, one came from Layer 8 and is biconical (#6609). The other, from Layer 14, is oblate (#6089). Both have hourglass perforations.

Shell

There are 12 shell specimens. Going stratigraphically, Layer 7 produced a biconical disc (#8864). A bead from Layer 8 is too fragmentary for its shape to be determined (#8237). A perforated gastropod shell came from Layer 13 (#3034). Of the two beads from Layer 14, one is an unperforated disc (#3149), while the other is a *Venus* shell perforated from the outside (#3064). Layer 16 produced three beads. One is an incomplete but beautifully incised trapezoidal pendant (#1307). Another is a disc (#3335), while the third is a bicone (#1844). An *Oliva nebulosa* shell from Layer 17 was ground at the spire to achieve the perforation (#1308). A tubular burnt bead came from Layer 18 (#9094), a long bicone was found in Layer 19 (#1401), and a disc-shaped bead (#9142) was uncovered in Layer 20.

Coral

One of the most interesting finds is a semi-cylindrical coral bead (Pl. VIIA, bottom) from Layer 6 that flares

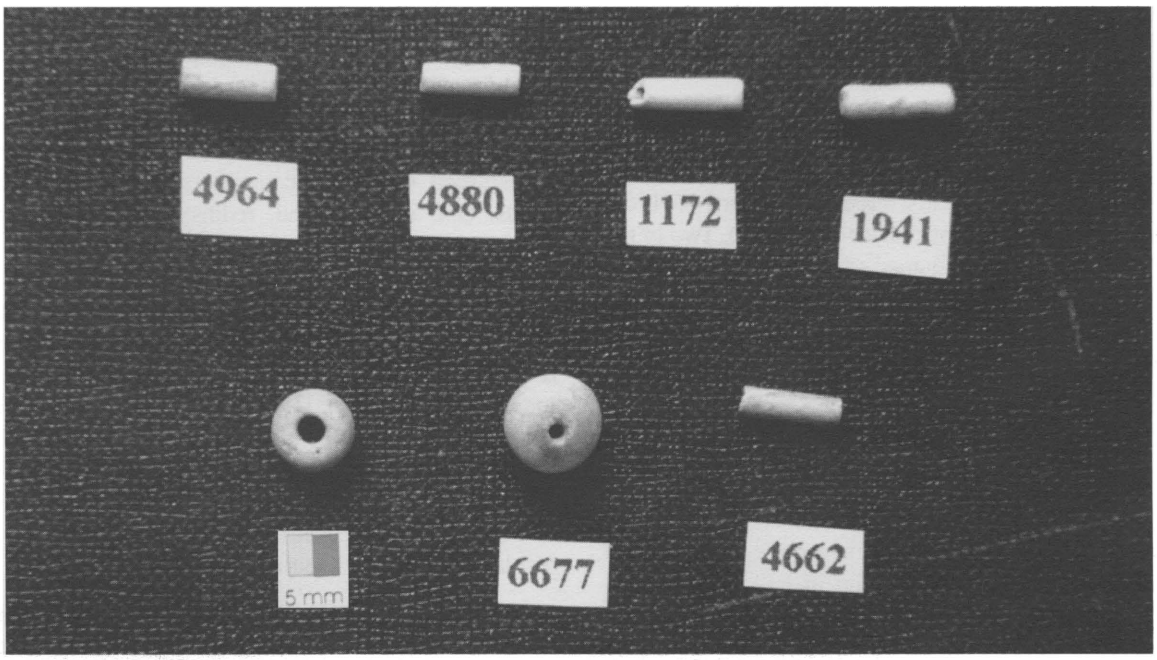

Figure 11. Faience beads from Balathal (photo: A.K. Kanungo).

slightly towards the ends (#8892). Coral might have come to the site from the Gujarat coast through contact with the Harappans.

Terra Cotta

In all, 19 terra-cotta beads/spindle whorls and pendants were found at Balathal (Pl. IXB). These have been divided into four categories: 1) *arecanut*-shaped; 2) *Ghata*; 3) other forms; and 4) pendants.

Arecanut-Shaped Bead

A single *arecanut*-shaped bead was found in Layer 14. This is in the form of the fruit of the betel-nut or *arecanut* palm (#1156). The bead is wheel-thrown and exhibits a black slip.

Ghata bead

Ghata is a very popular form among Indian beads. It is vase shaped with a disc-like rim, a constricted neck, and a truncated conical profile. The single recovered specimen (#3060) from Layer 13 is broken, wheel-thrown, and grooved at one end.

Other Forms

There are 14 terra-cotta beads/spindle whorls of other forms. Of the two broken, handmade, oblate specimens, one is from Layer 6 (#5848) and the other is from Layer 16 (#4715). There are also three handmade disc-shaped beads. The one from Layer 16 is plain (#4082), while the one from Layer 7 has a circular incised groove around the perforation at one end (#4808). The third specimen, from Layer 14, exhibits flat faces giving it an octagonal outline (#4114).

There are four large biconical specimens (almost certainly spindle whorls if not intended for animals), all broken, each from a different layer: Layer 8 (#585), Layer 9 (#940), Layer 16 (#1383), and Layer 17 (#1290). The latter specimen is a truncated bicone with a red slip.

Only one barrel-shaped bead was found. It came from Layer 18 (#1900). It is handmade, unfinished, and broken, probably while being perforated in a partially dried state. Likewise only one tubular specimen was uncovered (#4987). From Layer 18, it too is handmade and broken at both ends.

There are two irregular-rounded handmade beads, one from Layer 6 (#5709) and the other from Layer 17 (#2313). An attempt has been made to perforate the latter from both ends, probably while the clay was in a semi-dried state.

The remaining bead (#8943) is broken in such a way that its shape is undeterminable.

Pendants

Three possible terra-cotta pendants were found at Balathal. Two are shaped from pot sherds and both have notched edges. One, which is broken with three prongs remaining, is made from red ware (#9175). The other is made from red-slipped ware (#4896). It is possible that the latter functioned as a spindle whorl.

The third pendant is wheel-shaped with a slight collar on one side (#4375). The other side exhibits two concentric rows of punctate designs.

Steatite

Steatite beads were very numerous, 1,287 specimens being recovered. Mostly disc shaped, they were found in all layers of the Chalcolithic levels at Balathal. There was a sizable number of cylindrical beads, a few barrel-shaped and spherical specimens, two bicones (#2406 and 4732), a spacer (#1196), and a grooved specimen (#4651). A spectacular quantity of these beads was found inside a pot in Layer 8.

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ENDNOTE

1. Although many of the terra-cotta objects identified as beads may well be spindle whorls, especially the larger, cruder specimens with proportionately large perforations, the author has not attempted to segregate them or to exclude them from this article because such a segregation based on relative body and perforation size would be meaningless in a part of the world where there has been a large-scale use of such large beads to adorn the necks of animals (e.g., *see* Kanungo 2008).

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Plate VB. *Mewar:* Carnelian (left) and turquoise (right) beads from Chalcolithic Gilund, India (photo: A.K. Kanungo).

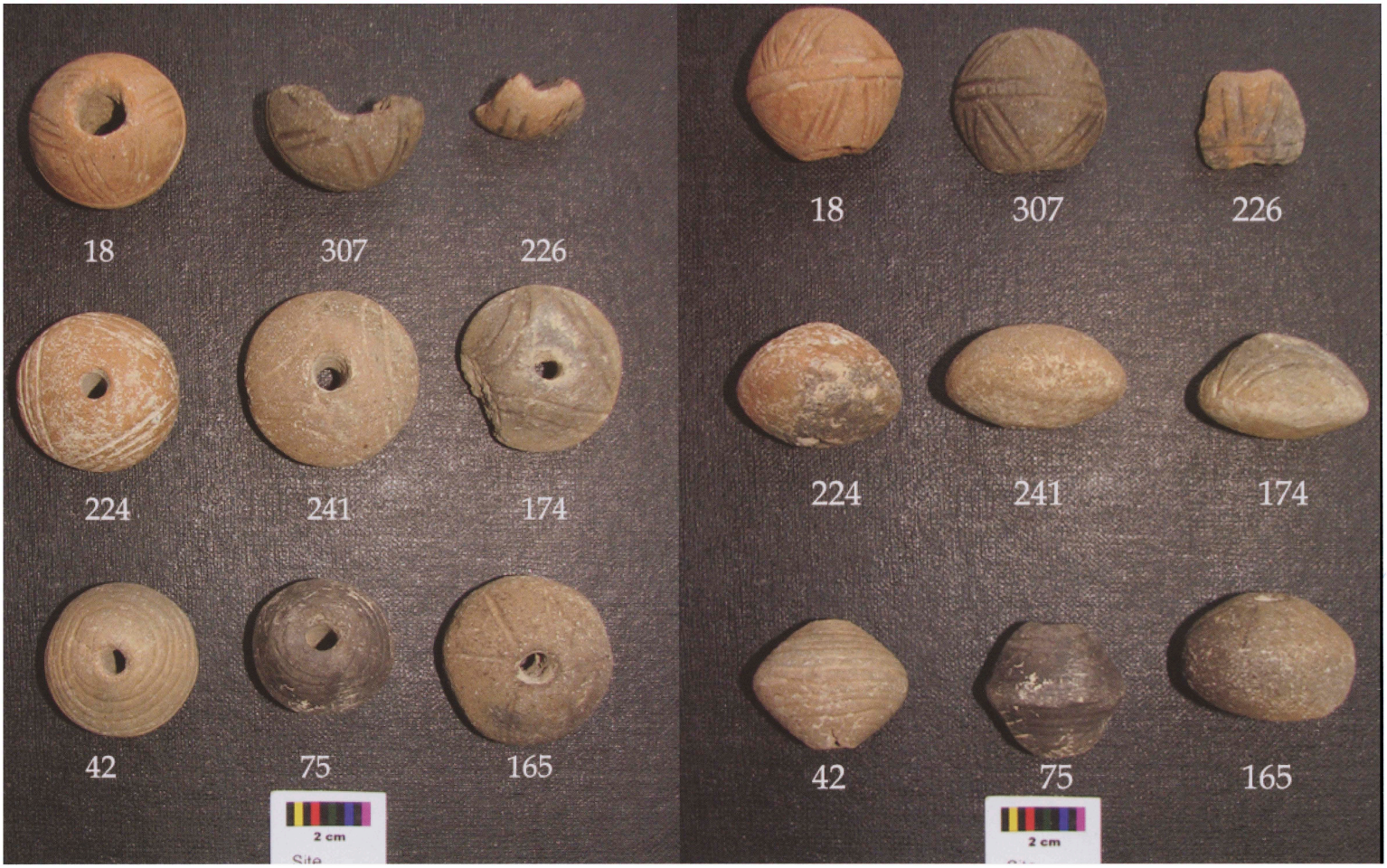
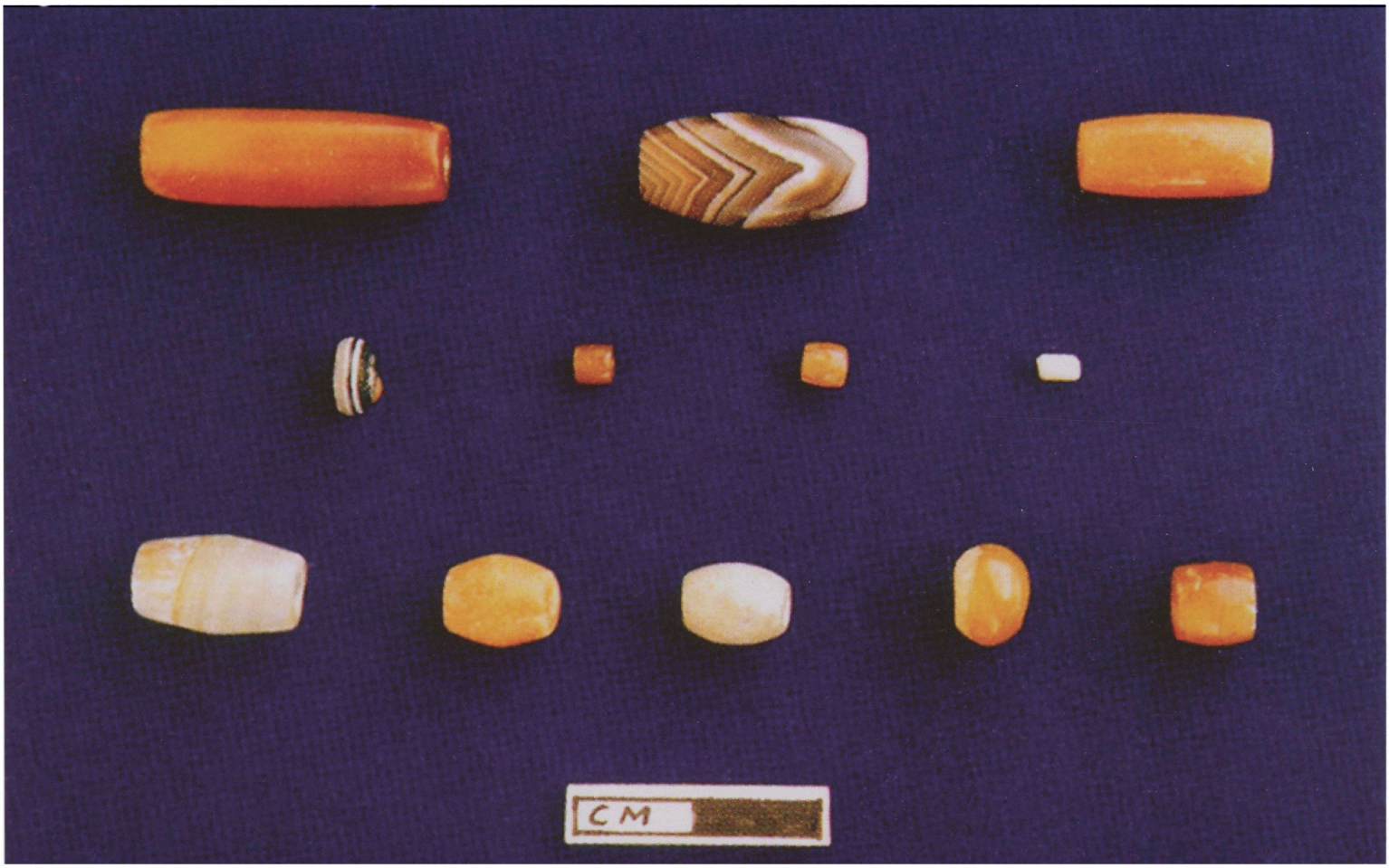


Plate VIA. *Mewar:* Incised terra-cotta beads/spindle whorls from Gilund (photo: A.K. Kanungo).

Plate VIB. *Mewar:* Beads of carnelian, agate, and faience from Ojiyana (*after* Meena and Tripathi 2002b).



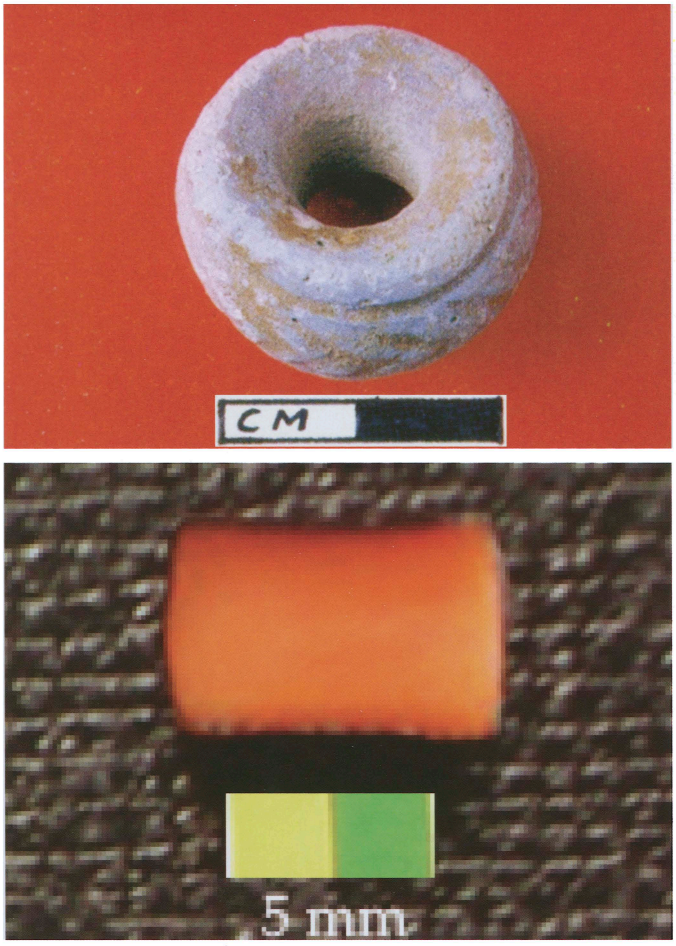


Plate VIIA. *Mewar:* **Top:** Harappan-type faience bead from Gilund (*after* Meena and Tripathi 2002b). **Bottom:** Coral bead from Balathal (photo: A.K. Kanungo).

Plate VIIB. M*ewar:* Amazonite beads from Balathal (photo: A.K. Kanungo).

Plate VIIC. *Mewar:* Beads of chert, quartz, agate, and jasper from Balathal (photo: A.K. Kanungo).

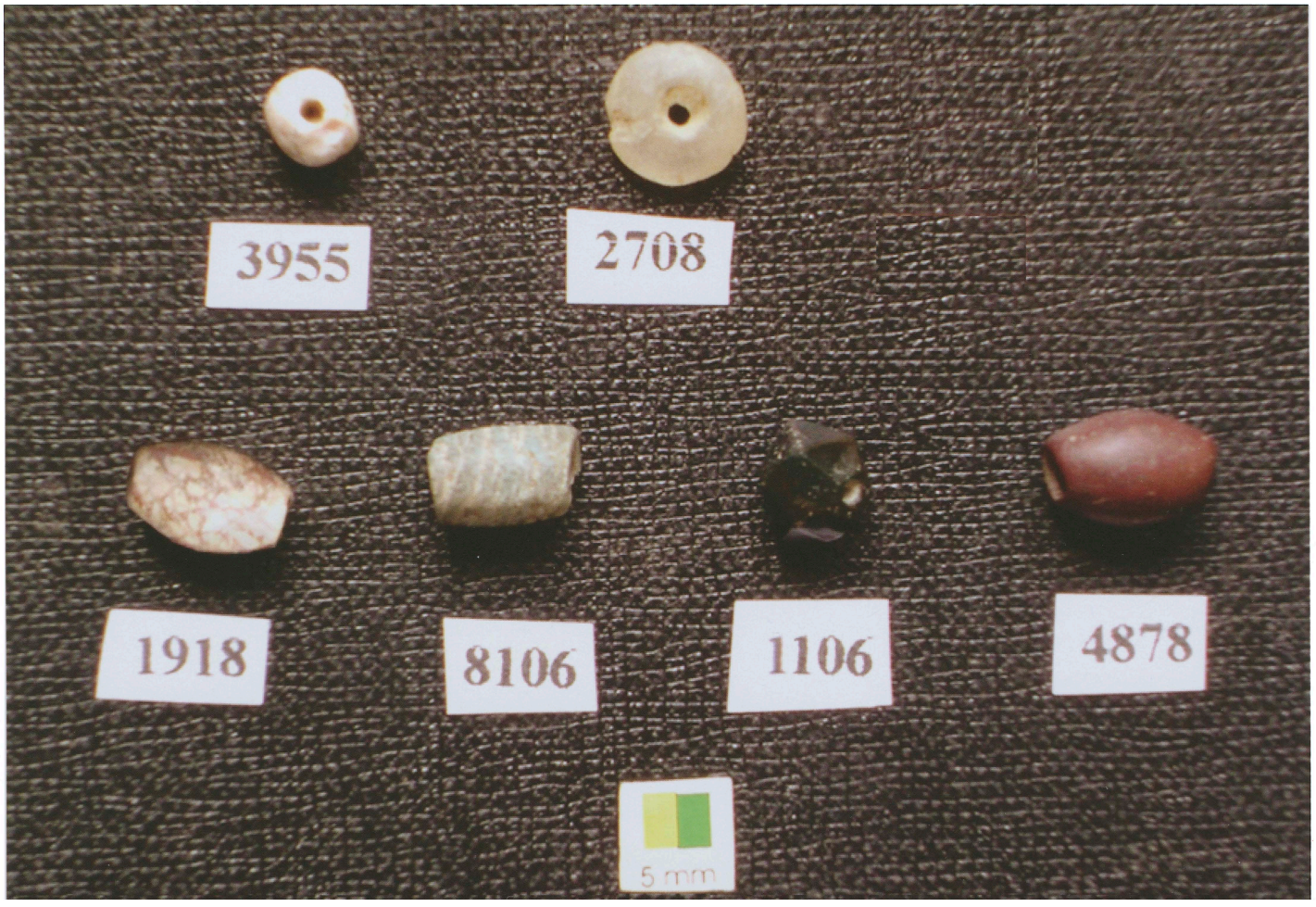
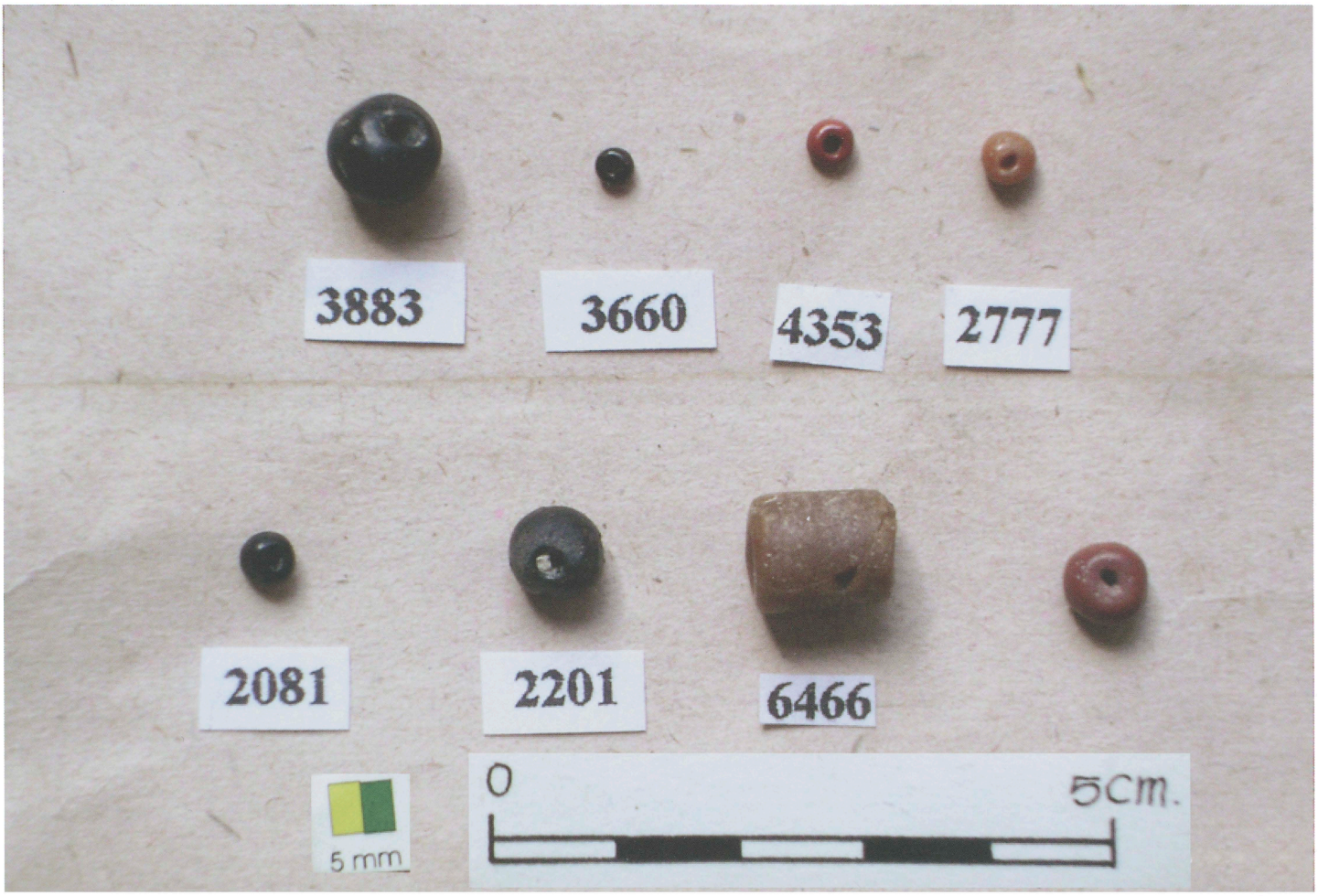


Plate VIIIA. *Mewar:* Carnelian beads from Balathal (photo: A.K. Kanungo).

Plate VIIIB. *Mewar:* Glass beads from Balathal (photo: A.K. Kanungo).



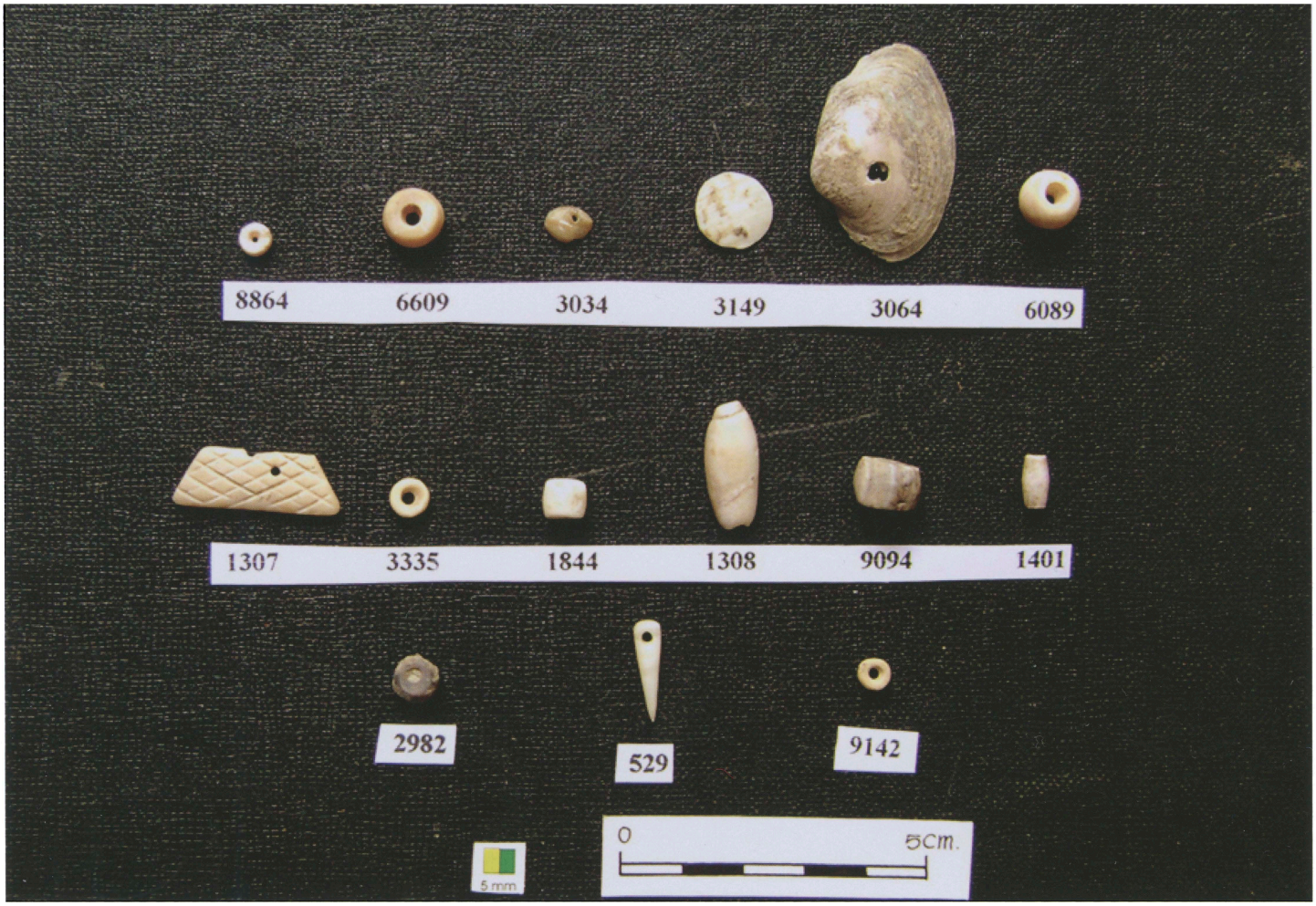


Plate IXA. *Mewar:* Shell, bone, and ivory beads from Balathal (photo: A.K. Kanungo).

Plate IXB. *Mewar:* Terra-cotta beads/spindle whorls from Balathal (photo: A.K. Kanungo).