



BEADS, PENDANTS AND BULLAE

A. INTRODUCTION

Expression of bead earlier used to denote "rosary" which was originally attributed to "prayer" in religious context. Subsequently, this word has been extended to mean any pierced object which can be strung. The great diversity in form, portability and lasting power make beads one of the most valuable articles for tracing the influence of cultures, civilizations and their aesthetic values.

In Indian context, man-made bead starts occurring from the Upper Palaeolithic period. Sali has reported beads of ostrich egg shell from Upper Paleolithic levels at Patne¹. Besides Patne, Bhimbetka has also reported evidence of such type of beads from late Pleistocene context². Apart from this, there are other sites in Maharashtra as well as in the Chambal valley in Madhya Pradesh from where such beads have been recovered³. The finds from Kurnool has been dated to c. 19,000 BP by the TL method⁴. In Mesolithic context, cylindrical beads made from tubular bones have been reported from Lekhahia⁵ and stone bead from Chopani Mando⁶. The use of beads in India is gleaned through all the subsequent periods till date. The protohistoric period has witnessed abundance in bead

production and its profuse use since then. Around the beginning of the Common Era, the sites located on trade routes have produced large quantities of beads as an important commodity for internal consumption and hinterland as well as overseas trade.

The earliest literary reference to bead occurs in *Atharvaveda* which refers to several types of beads and amulets. While the *Samhitas* and *Sutra* traditions mention to *mani-kara* and various methods of bead making. Likewise, the Buddhist and Jain literatures cite a variety of necklaces of beads and pendants. Similarly *Ratna pariksha* of Buddhahatta deals with precious and semiprecious stones⁷.

The materials used for making beads include stone, terracotta, bone, ivory, shell, metal, glass, etc. Broadly, the shapes met with are barrel, cylinder, spherical, tubular, bicone, circular and multifaceted geometrical types etc. Amulets and pendants have displayed a wide range of shapes and motifs. Amulets are considered to be magical besides possessing curative value. *Ashta-mangala* signs are regarded to be auspicious, which include symbols like swastika, *srivatsa*, *nandyavarta*, *ghata*, *triratna*, *pipal* leaf etc. Amulets bearing the shapes of tiger claw and frog are considered to prevent the effect of evil eye and to avert fever respectively, whereas, tortoise shaped amulet is regarded as beneficial to long-life⁸. Such type of amulets have been reported from a number of sites in the early Historic context namely Prakash, Nevasa, Taxila, Sirkap, Sambhar, Kosam, Ter, Kaundinyapura, Ujjain, Ahhichatra, Balapur, Maski, Nasik, Kumrahar, Rajghat etc⁹.

The findings of beads at Adam are of vital importance. The study of material used and types produced is significant as

1. S.A. Sali, Upper Paleolithic Research since Independence, *BDCRI*, 34, 1974, pp. 154-158.
2. P. Francis, The Ostrich, Ostrich Eggs and Ostrich Egg Shell Beads, *ME*, VII, 1983, pp. 142-146.
3. V.N. Misra, Mesolithic Culture in India- Keynote, *Mesolithic India* (eds) V.D. Misra and J.N. Pal, Allahabad, 2002, pp. 26-27.
4. P. Francis, Early Human Adornment in India, Part 1, The Upper Paleolithic, *BDCRI*, 40, pp. 137-144.
5. R.K. Varma, The Mesolithic of India, *Puratattva*, 13-14, 1981-83, pp. 27-36.
6. B.B. Misra, The Mesolithic Culture of the Belan Valley, *Mesolithic India* (eds) V.D. Misra and J.N. Pal, Allahabad, 2002, p. 228.

7. Moti Chandra, Technical Arts in Ancient India, *JUPHS*, XXIV-XXV, 1951-52, pp. 161-185.
8. S.B. Deo, *Indian Beads: A Cultural and Technological Study*, Pune, 2000, pp. 5-50.
9. Moreshwar G. Dikshit, *Excavations at Kaundinyapura*, Bombay, 1968, pp. 96-98.

Table No. 10.1 : Period wise frequency chart of finished beads of different shapes

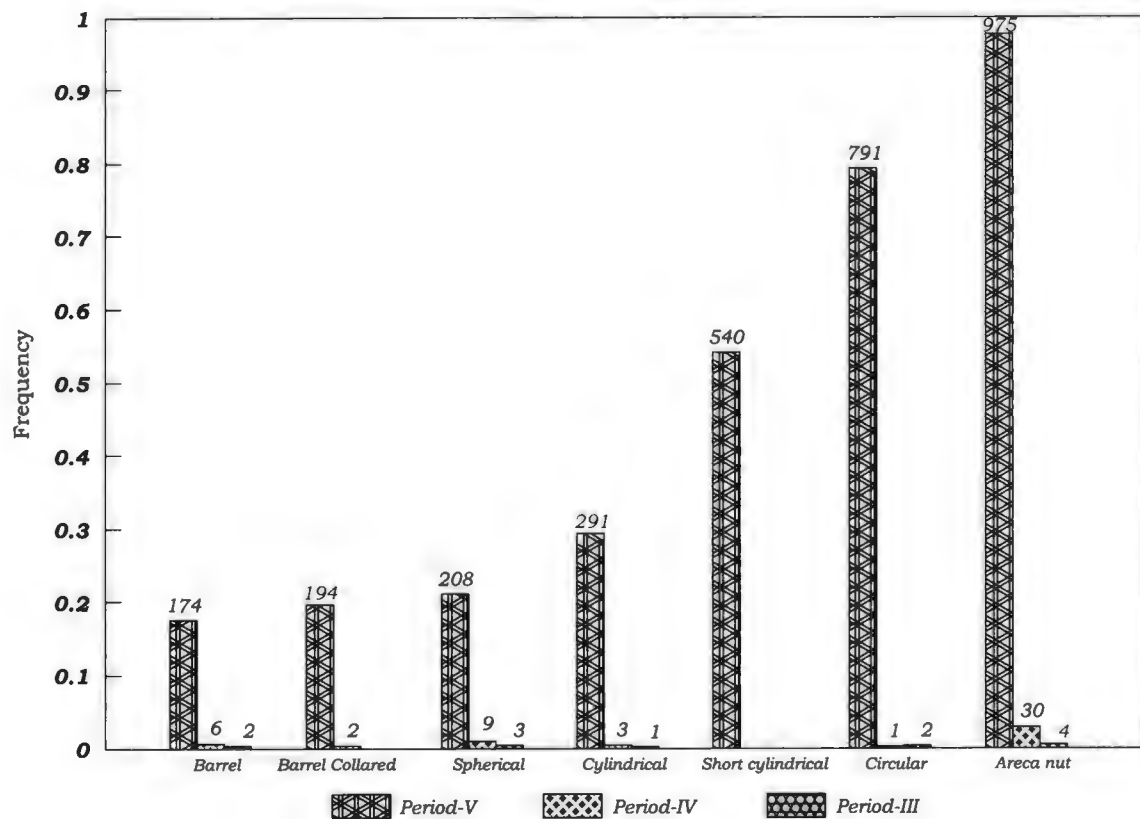
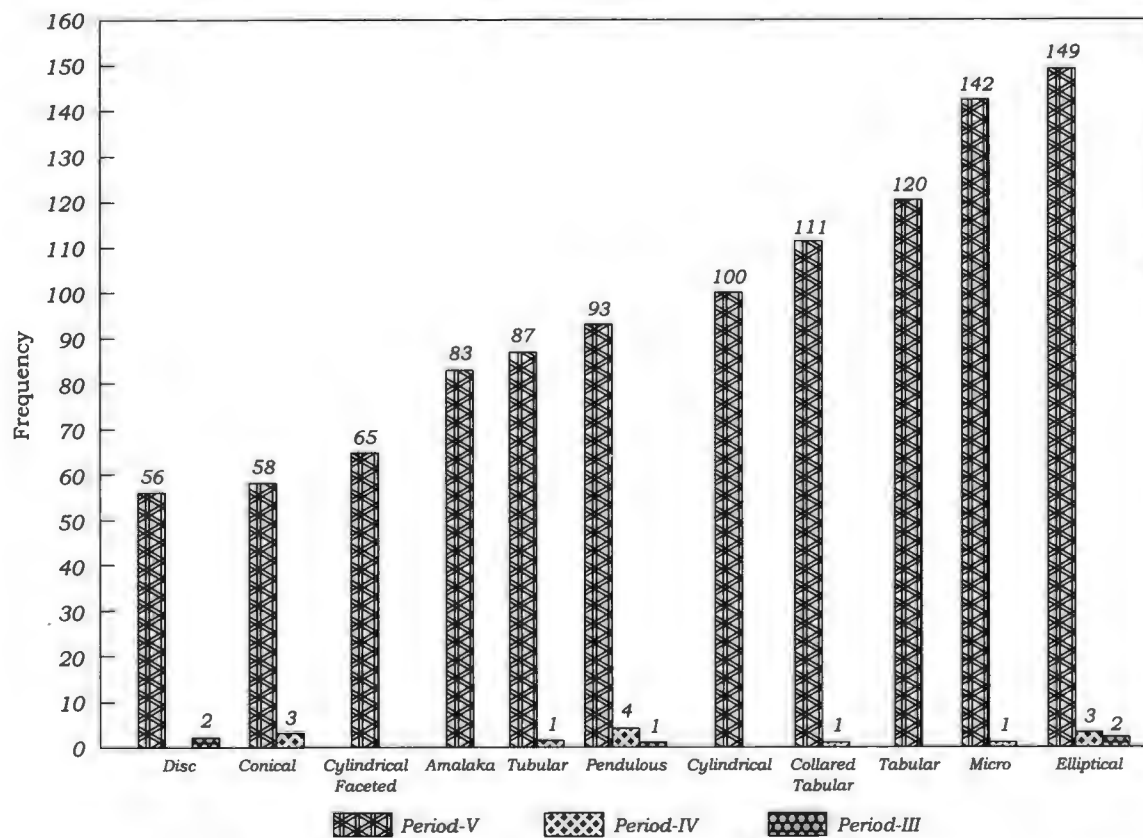


Table No. 10.2 : Period wise frequency chart of finished beads of different shapes



some of the finds are of outlandish origin while some are native. As far as beads from the early Historical context are concerned, the site of Adam may be compared with the site of Taxila, both quantitatively and qualitatively.

The excavations at Adam have produced an enormous number of four thousand eight hundred and twenty three finished beads, fashioned out of say thirty three different materials and in forty three different shapes. Besides these, there are good numbers of attempted beads in different stages of manufacture. There are examples of stages like initial rough cutting to fairly well cut and partly polished, fully polished etc. Apart from these, specimens of bead showing steps of partly and fully drilled hole, at times faulty drill indicated by hole not meeting each other as they were drilled individually from either ends are also recovered. Even, an etched bead on carnelian has been found with an incomplete hole indicating the practice of drilling the bead after etching. Quite a few moulds of differently shaped beads ranging from daily use types to highly decorated and big sized ones for occasional or religious uses have also been found from period V. Incidentally, the excavation has not yielded any drill bit. However, a sizable number of bead polishers and whetstone recovered from the site indicate onsite production activities.

The raw materials quarried from the veins and faults of the rocks in the hills lie in the vicinity of the site. In the Vardha-Wainganga valley there is a regular source of crystalline quartz whereas the source of chalcedonic quartz lies in the south of Godavari river¹. The site has also reported beads of different raw materials, which are not available in the Vardha-Wainganga valley, indicating distant importation. Lapis lazuli is one such material which travelled long distances, the source of which lies in Badakshan in the northeast of Afghanistan, Gulabgarh in the Padar

area of southern Kashmir and Nagpahar in the hills of Ajmer². Lapis was one of the items exported to the Roman world from India³, indicating transportation of lapis as raw material to the lapidary centres of the Deccan and exportation of finished products to the Roman mart. The tradition seems to have continued as late as the late nineteenth century⁴.

In view of the above findings, the ancient settlement at Adam must have acted as a major contributor in the bead manufacturing industry besides participation in inland and overseas trade. The data retrieved at the site indicate the beginning of an organised lapidary industry from period IV onwards wherein specialised craft persons were commissioned to meet the requirements of contemporary marts supporting flourishing economy of period V.

A general description is given below of the finished beads classified according to their shapes.

1. Areca nut: A total of one thousand nine terracotta beads have been found. A majority of them (nine hundred and seventy five) belongs to period V whereas only thirty come from period IV and from period III showing the general preference of this particular shape during the early Common Era.
2. Annular: Out of a total of eighty four beads found, eighty three are of terracotta and the remaining one is of glass. Period V accounted for forty six of them while fifteen come from period IV and nineteen from period III, four are found from period II also. Incidentally, these are the only beads found from period II.

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2. Dilip K. Chakrabarti, *Lapis Lazuli in Early India*, ME, II, 1978, pp. 51-58.
 3. E.H. Warmington, *The Commerce between the Roman Empire and India*, Cambridge, 1928, pp. 251-258.
 4. *Gazetteer of the Bombay Presidency*, vol. 6, Bombay, 1880, p. 201.

1. Wheeler, Arikamedu, *AI*, 2, 1946, pp. 122-23, fig. 49.

Table No. 10.3 : Period wise frequency chart of finished beads of different shapes

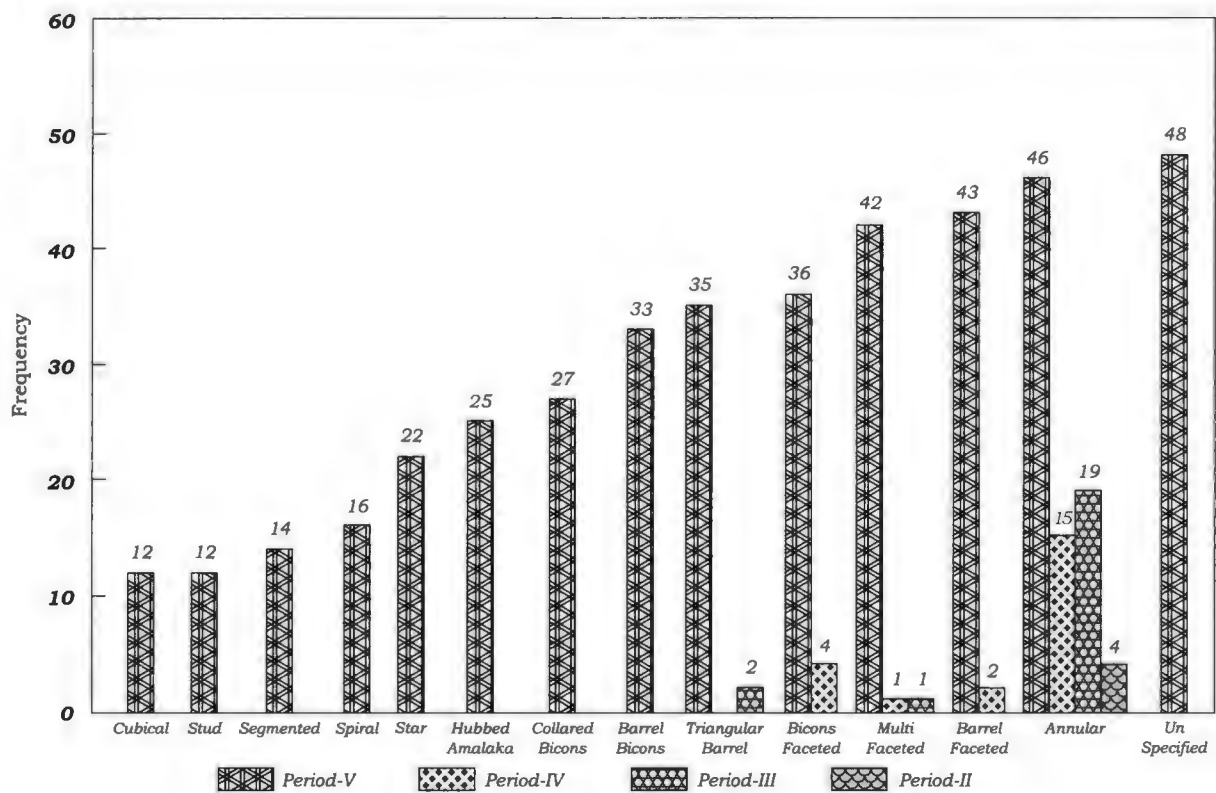
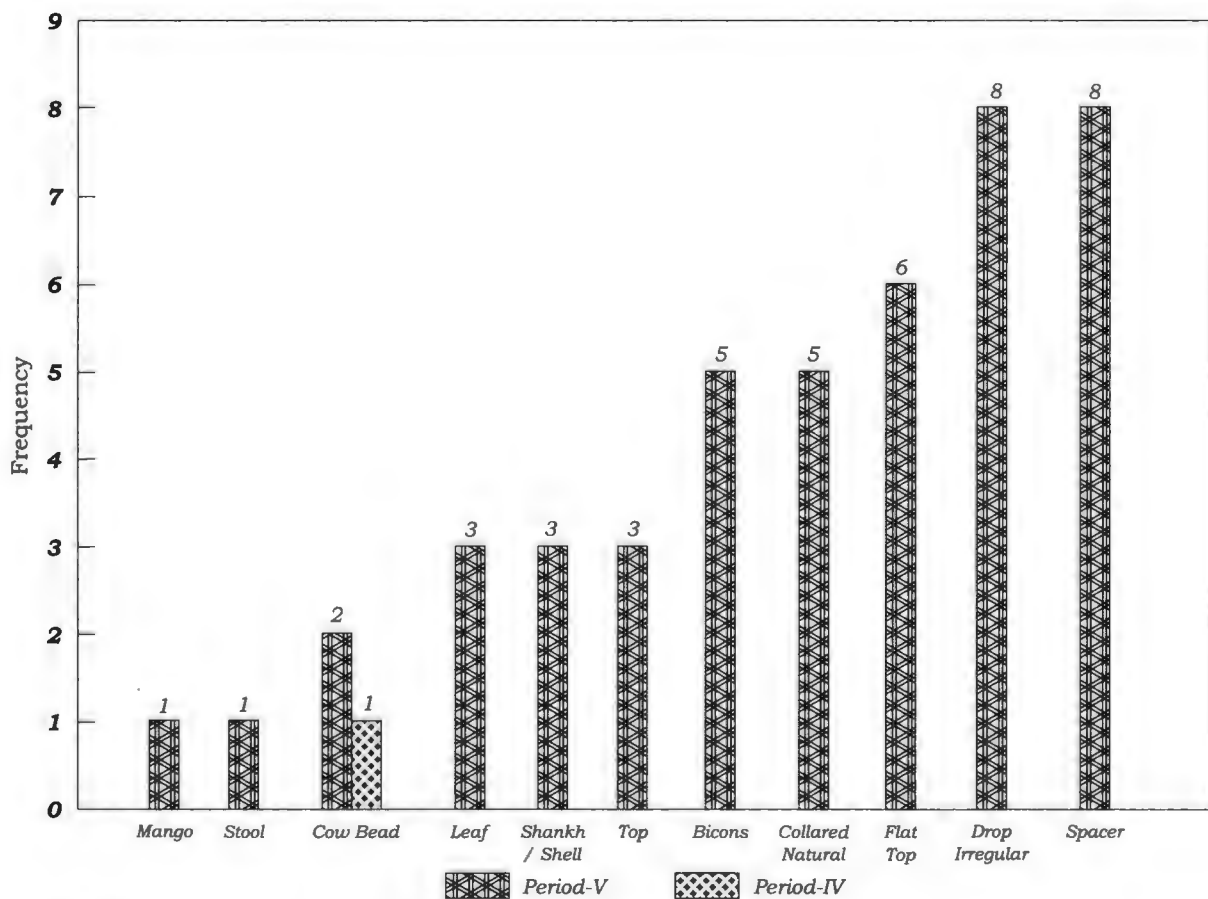


Table No. 10.4 : Period wise frequency chart of finished beads of different shapes



3. Short cylindrical: There are five hundred and forty beads of this type recovered from the period V. For this type of bead, glass appears to be a preferred medium as a total of four hundred and ninety beads has been found. Twenty four beads are of agate, three of chert, two of limestone, one each of crystal and paste, and four of unidentified stones. Apparently, glass beads have always remained as a poor man's commodity.
4. Micro beads: One hundred and forty three micro beads are found of which eighty four are made of glass, fifteen of chert, six of jasper, nineteen of steatite, one each of faience, milky quartz, lime stone and flint, two of paste, three of copper, four of gold, and six of unidentified stones. This type of bead has been reported from period V with a few exceptions from period IV.
5. Circular: A total of seven hundred and ninety four beads are found out of which five are on terracotta, one hundred and sixty eight on glass, eighteen on agate, four hundred and sixty five on chert, one on crystal, seventeen on jasper, three on carnelian, four on chalcedony, ten on steatite, three on amethyst, seven on faience, thirty five on milky quartz, two on silver, thirteen on copper, two each on lead and gold, one each on ivory, shale, glazed and laterite and five on unidentified stones. Out of which seven hundred and ninety one are from period V, one from period IV and two from period III.
6. Stud: A total of twelve beads are found of this shape. All are made by drilling a hole across the terracotta stud and all are from period V.
7. Cubical: A total of twelve beads are found of this shape on different materials. Three are on glass, two on jasper, one each on faience and lapis lazuli, three on copper and two on unidentified stones. All are from period V.
8. Spacer: Eight spacer beads are found with multiple holes drilled across to facilitate spacing of other beads in a necklace. Three are on terracotta, two on glass and one each on steatite, faience and unidentified stone. All come from period V.
9. Cylindrical: A total of two hundred and ninety five beads of this shape have been found. Here, the bead has been classified on the basis of its length where it is more than double of its diameter. Thirty eight of this type are made on terracotta, twenty six on glass, one hundred and seventy four on agate, nine on chert, nine of crystal, two on jasper, fourteen on carnelian, seven on chalcedony, two on steatite, one each on amethyst, faience, quartz, milky quartz, paste, limestone and sandstone, three on copper and four on unidentified stones. A total of two hundred and ninety one are from period V, three from period IV and one from period III.
10. Spherical: Two hundred and twenty of this types have been exhumed of which sixty are on terracotta, eleven on glass, five on agate, ten on chert, three on quartz, thirteen on crystal, twenty two on jasper, twenty nine on carnelian, five on chalcedony, three on steatite, ten on amethyst, two on faience, eleven on milky quartz, two on flint, one each on paste, sandstone, corundum and bone, two on copper, six on gold, five on limestone and nine on unidentified stones. Out of the total two hundred and eight are from period V, nine from period IV and three from period III.
11. Tubular: Comparatively, the diameter of this type of bead is less than its length. Out of eighty eight beads, four are on terracotta, fifty six on glass, one each on agate and shale, ten on chert, two on carnelian, three on steatite, five on faience, four on copper and two on

Table No. 10.5 : Frequency chart of finished beads of different shapes listed in serial order of the text

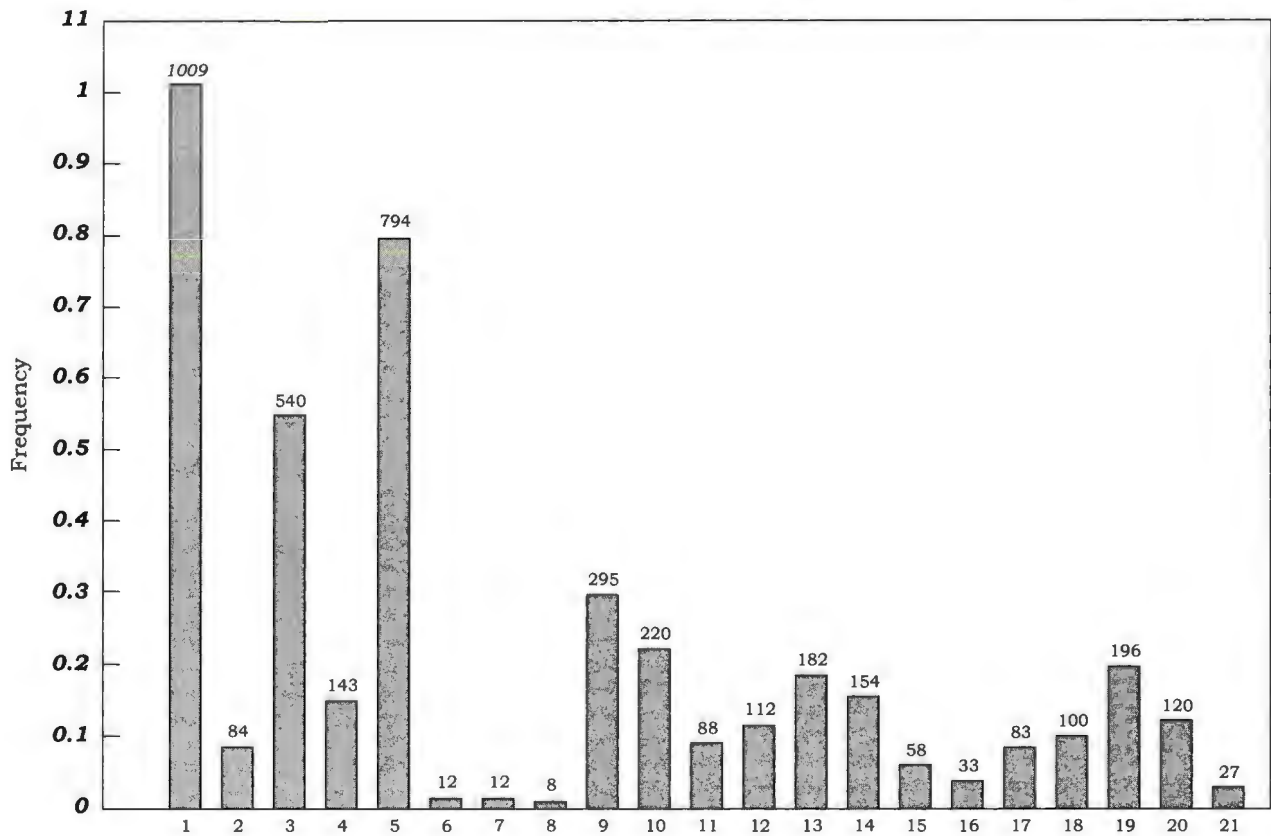
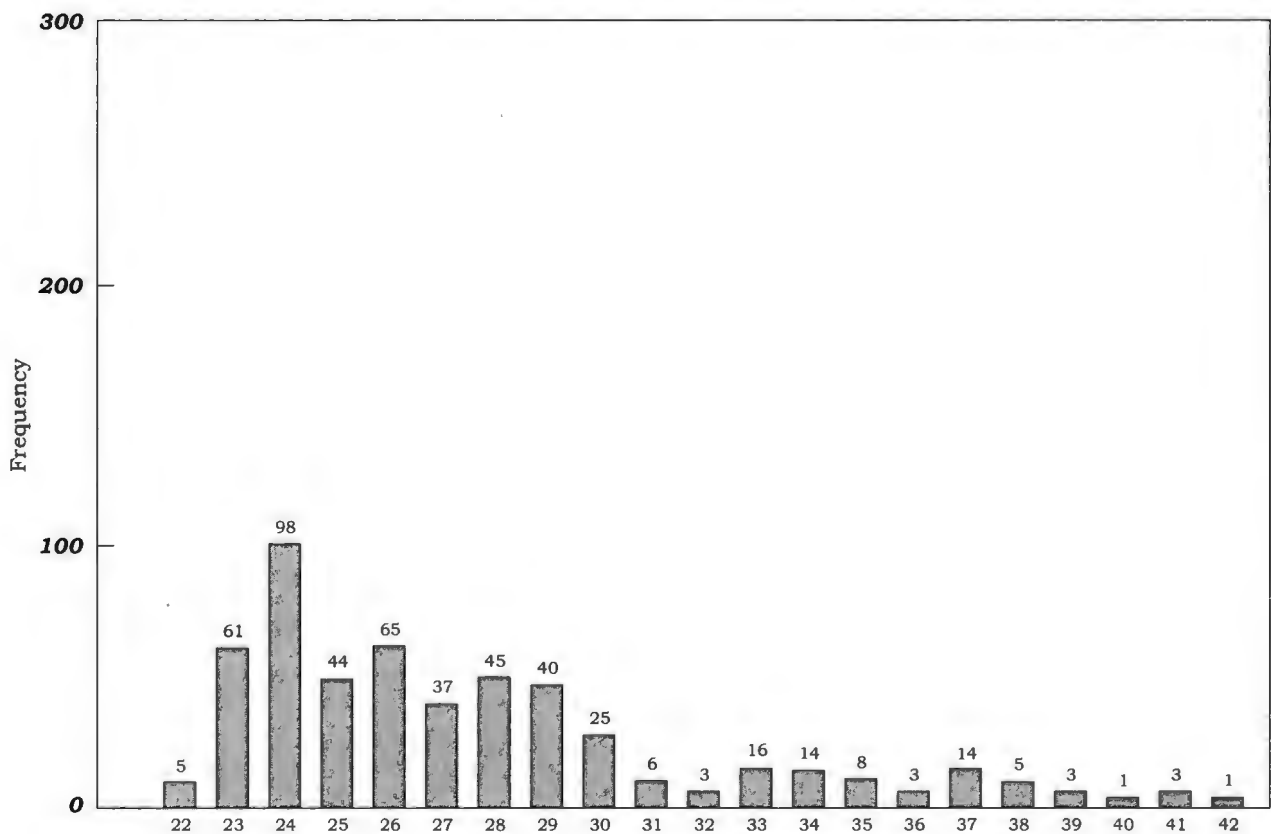


Table No. 10.6 : Frequency chart of finished beads of different shapes listed in serial order of the text



unidentified stones. Except one from period IV, rest are from period V.

12. Tabular: A total of one hundred and twelve tablet shaped beads are found out of which three are on terracotta, twenty five on glass, fifteen on agate, four on chert, thirteen on crystal, eleven on jasper, fifteen on carnelian, two on chalcedony, one each on milky quartz, lapis lazuli and copper and two on unidentified stones. Except one from period IV, rest are from period V.
13. Barrel: A total of one hundred and eighty two barrel shaped beads, out of which ten are on terracotta, eighteen on glass, sixty two on agate, three on chert, two on quartz, twenty on crystal, fifteen on jasper, twenty two on carnelian, seven on chalcedony, nine on steatite, four on amethyst, one each on faience, milky quartz, flint, shale and ivory, three on copper and two on limestone. One hundred and seventy four beads are from period V, six from period IV and two from period III.
14. Elliptical: A total of one hundred and fifty four beads of elliptical shape are documented out of which one hundred and thirty two are on terracotta, three each on glass, crystal and agate, one each on chert, carnelian, milky quartz, sandstone and amethyst, two each on quartz, faience and jasper and two on unidentified stones. One hundred and forty nine beads are from period V, three from period IV and two from period III.
15. Disc: Biconvex beads with hole drilled across have been classified under this group. Out of fifty eight beads, nine are on terracotta, twenty on glass, one each on chert, faience, paste, silver and sandstone, three on crystal, two each on copper and unidentified stones. Fifty six beads registered are from period V and two from period III.
16. Bicons: Barrel shaped beads with a ridge at the centre has been classified under this group. A total of thirty three beads are found from period V of which five are on terracotta, thirteen on glass, three on amethyst, two each on chert, carnelian, faience and crystal, one each on jasper, milky quartz, opal and unidentified stone.
17. Amalaka: Reminiscent to the shape of amalaka over the temple, this shape has been coined. A total of eighty three beads from period V are found out of which forty four are on terracotta, two on glass, three each on chert and milky quartz, nine on steatite, twenty on faience, one each on copper and unidentified stone.
18. Cylindrical Collared: The normal cylindrical shaped beads having collar on either end are classified under this category. One hundred beads of this variety are found from period V, out of which one each on terracotta and jasper, thirty nine on glass, two on chert, five on steatite, forty two on faience, six on paste and four on unidentified stones.
19. Barrel Collared: The normal barrel shaped beads with a collar on either end are classified under this type. One hundred and ninety six beads are found, out of which eighteen are on terracotta, thirty on glass, two on steatite, one hundred and twenty six on faience, one each on paste and copper and, three each on amethyst chert and unidentified stones. Except two from period IV, rest are registered from period V.
20. Tabular Collared: The normal tablet shaped beads with a collar on opposite end through which the holes are drilled have been classified under this type. Out of one hundred and twenty beads of period V, nine are on terracotta, sixty eight on glass, three on agate, two on chert, six each on jasper and steatite, one each on amethyst and paste, nineteen on

Table No. 10.7 : Period wise frequency chart of finished beads of different materials

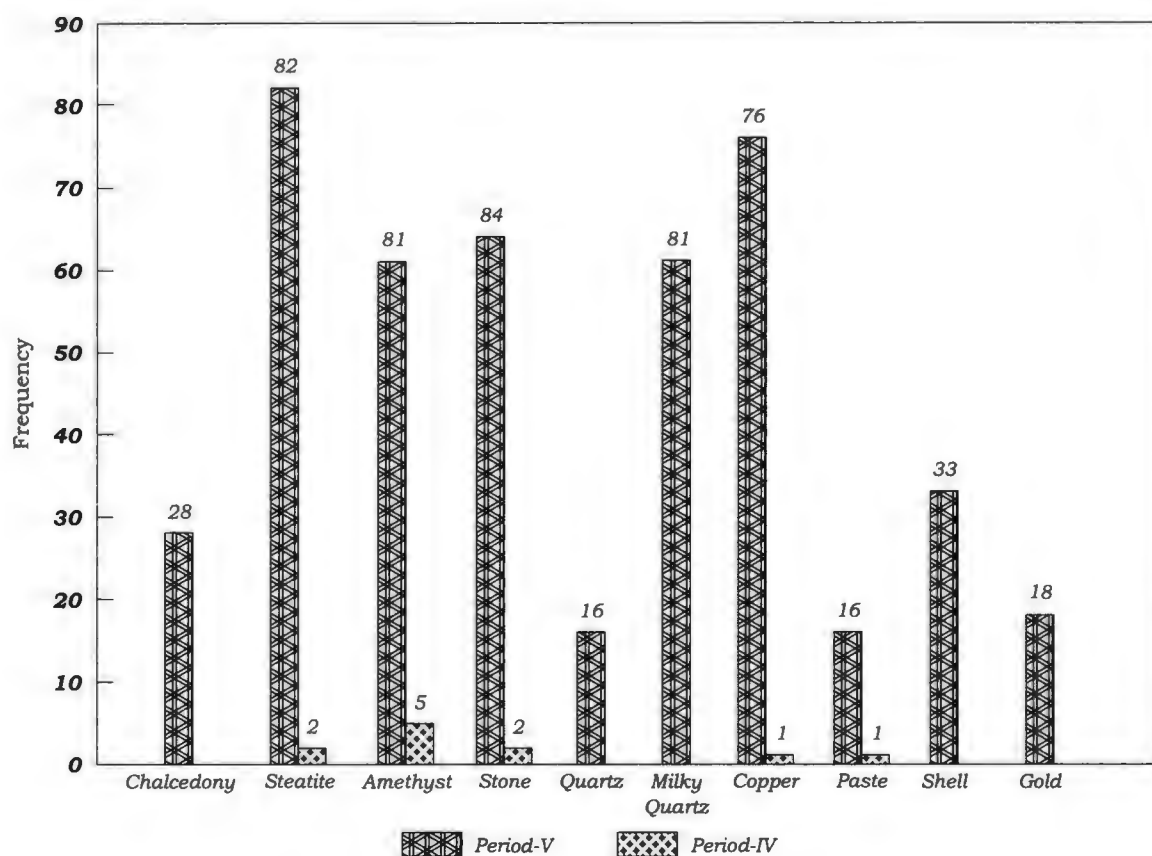
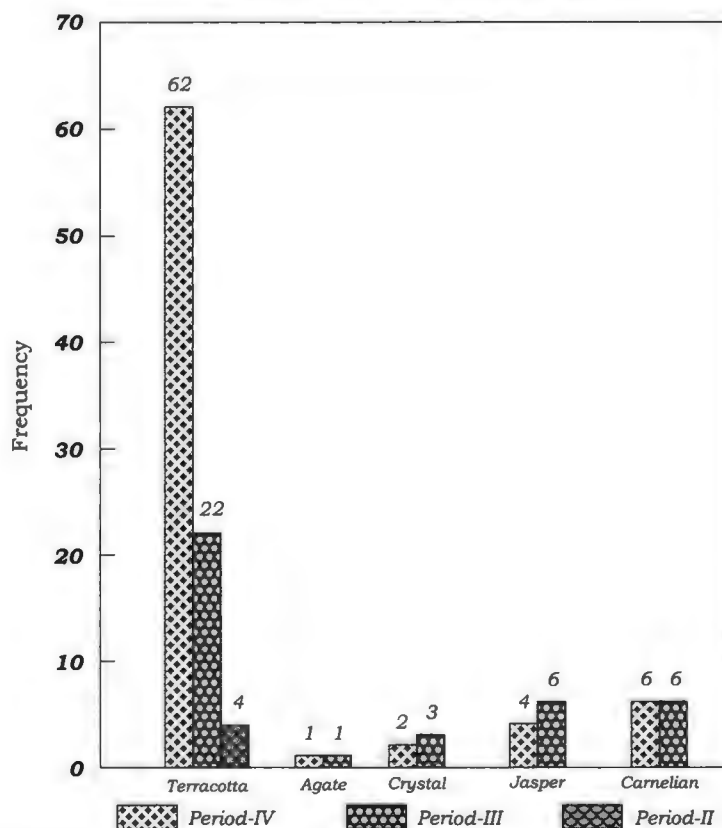


Table No. 10.8 : Period wise frequency chart of finished beads of different materials



- faience, and five on unidentified stones.
21. Tubular Collared: The normal tubular beads with a collar on either end are placed under this group. Out of twenty seven beads from period V, twenty three are on glass and four on faience.
 22. Bicone Collared: The normal bicone beads with a collar on either end are classified under this category. Five beads of faience are documented from period V.
 23. Conical: The normal conical shaped beads with a hole on the upper half are categorised in this group. Out of sixty one beads, fifty eight are on terracotta and one each on glass, bone and copper. Except three from period IV, rest are from period V.
 24. Pendulous: Pendulum type of beads used as pendants are classified under this head. Out of ninety eight beads, forty one are on terracotta, five each on glass, agate, ivory and bone, twenty nine on copper, two on gold, one each on chert, amethyst, shale, silver, limestone and unidentified stone. Ninety three of them belong to period V, four to period IV and one to period III.
 25. Multifaceted: Basically cubical with the corners or sometimes even the faces also cut in different angles to form many faces are termed as multifaceted. Out of forty four beads, one each is on chert, terracotta, glass, amethyst, flint, gold and opal, five on crystal, twelve on jasper, three on carnelian, nine on faience, four on milky quartz, two each on copper and corundum. Forty two beads have been attributed to period V while one each to period IV and III.
 26. Cylindrical Faceted: Cylindrical beads with longitudinally cut surface resulting different faces have been categorised in this group. Out of sixty five beads from period V, two each are made on terracotta, chert, copper and quartz, seventeen on glass, four each on agate and carnelian, fifteen on crystal, three each on jasper, amethyst and lapis lazuli, and eight on unidentified stones.
 27. Triangular Barrel: The normal barrel shape with a triangular section has been classified under this group. Out of thirty seven beads, one each are of glass, copper and chert, twenty three on crystal, five on jasper, two each on carnelian, limestone and chalcedony. Except two beads from period III, rest are registered from period V.
 28. Barrel Faceted: The normal barrel shaped beads with facets on its sides fall in this group. Out of forty five beads, one each is on terracotta, carnelian, topaz and chert, seven on glass, two each on agate and quartz, twenty two on crystal, three on jasper, five on amethyst. Except two beads from period IV, rest are documented from period V.
 29. Bicone Faceted: The normal bicone shape with faceted sides fall in this category. Out of forty beads, five each are on glass and carnelian, four on quartz, fifteen on crystal, three on jasper, six on amethyst, one each on steatite and unidentified stone. Except four from period IV, rest are reported from period V.
 30. Hubbed *Amalaka*: The normal *amalaka* shaped beads with hubs on either side are classified under this category. Out of twenty five beads from period V, five are on terracotta, two on chert, five on steatite, twelve on faience and one on milky quartz.
 31. Flat Toped Drop: Drop shaped pendants with chamfered top with a hole in the upper segment fall under this category. Registered are six beads on terracotta from period V.

Table No. 10.9 : Frequency chart of Period-V of finished beads of different material

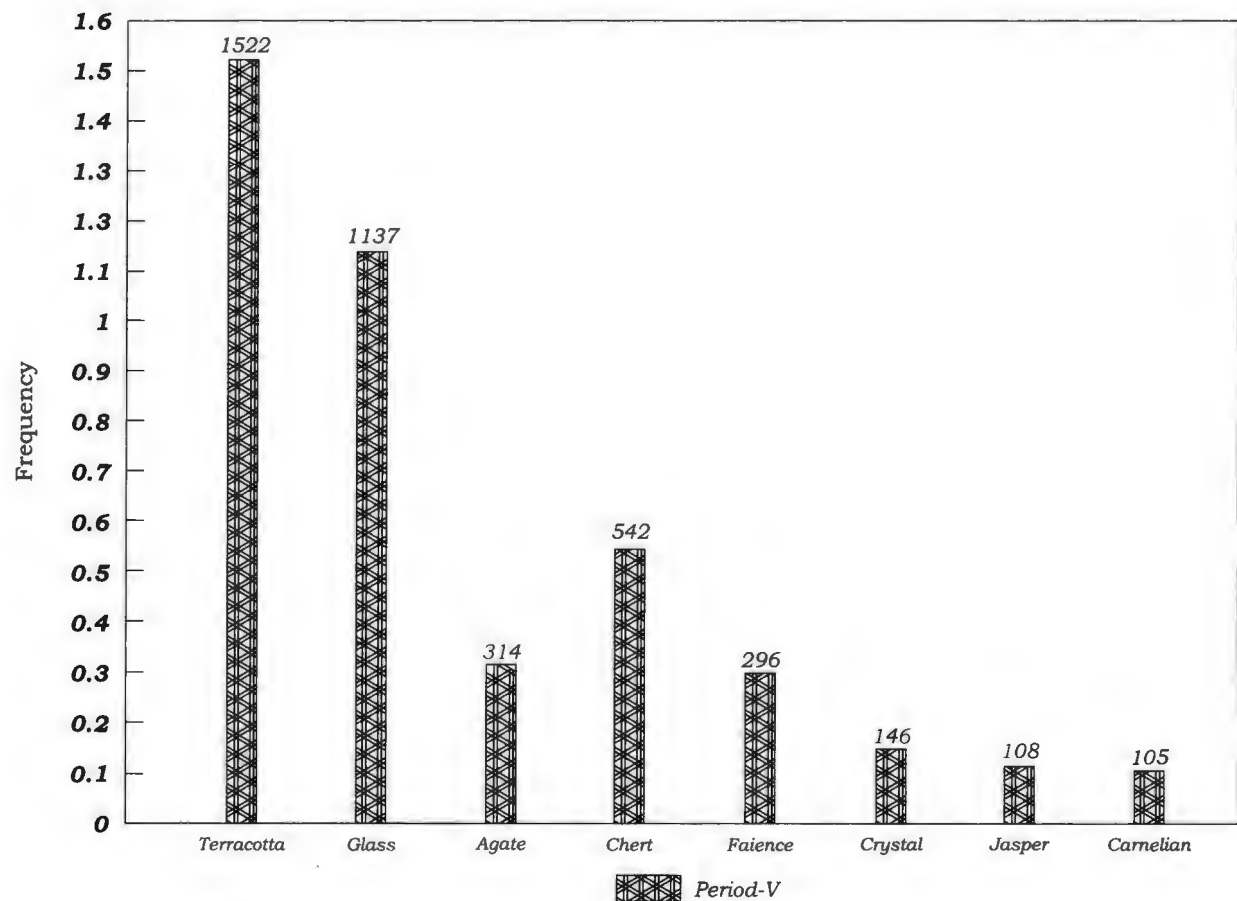
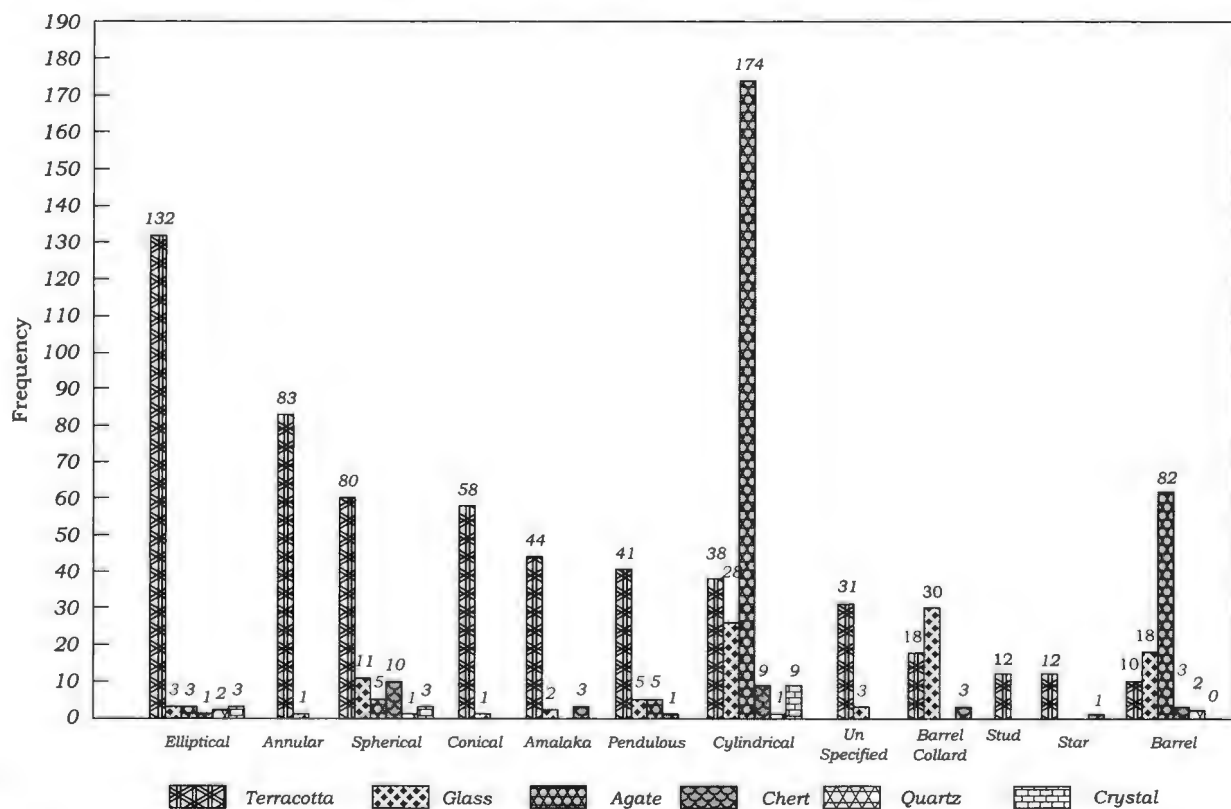


Table No. 10.10 : Frequency chart of finished beads of different shapes on types of material from Period-V



32. Cow Beads: Heavy terracotta pendants of coarse fabric having rough finishing are put under this category. Out of three cow beads, two belong to period V and one to period IV.
33. Spiral: Cylindrical beads with spiral feature externally fall under this category. Out of sixteen beads from period V, one each is on terracotta, faience and gold, five each on glass and copper and three on silver have been registered.
34. Segmented: Cylindrical beads with surface divided into segments transversely come under this category. Out of fourteen beads from period V, one each is on terracotta, milky quartz, bone, copper, and limestone and nine on glass have been documented.
35. Irregular: Beads without a regular shape are put under this category. Out of eight beads reported from period V, one is on crystal and seven on amethyst. The hardness of the raw material causes this irregular shape.
36. Shankh/Shell: Normal gastropod shell shaped beads fall in this category. Out of three beads of period V, two are on terracotta and one on unidentified stone.
37. Star: Shape of bead resembling a star has been placed in the category. Out of fourteen beads of period V, twelve are on terracotta, one each on chert and faience have been listed.
38. Natural: The gastropod shells have been used as bead by piercing hole. Five shell beads have been registered from period V.
39. Top: Shapes resembling the cone shaped spinning toy have been put under this category. Three beads one each of steatite, faience and lead have been recorded from period V.
40. Stool: One terracotta bead resembling miniature wooden stool reported from period V has been registered under this category.
41. Leaf: Beads of leaf shape come under this category. Three such beads have been documented from period V; two of them are on gold and one on terracotta.
42. Mango: One bead of mango shape, reported from period V is dressed out of jade of pale green colour.

There are tables showing frequency of beads of different material, shapes and periods with layer wise distribution for better appreciation of the findings (Table Nos. 10.1 to 10.15).

The site has reported a number of evidence like unfinished beads, bead polishers, furnaces, raw material etc. to suggest the magnitude of lapidary industry the site had witnessed as major industrial activity. It points towards a well developed industry with considerable amount of balance to meet the demand and supply of contemporary market economy.

Most of the locally available semi precious stones have been used for bead manufacturing besides terracotta and glass. Apart from this, there are evidences of some imported variety of semi-precious finished stone beads which are not locally available, suggesting long distance exchange.

The evidence of lapidary industry appears in a meagre way from period IV. The sudden spurt in bead production during period V shows the emergence of an organised sector in bead industry wherein the craftsmen were commissioned by the chieftains of Adam actively participating in hinterland and overseas trade and commerce.

The unfinished beads are of different stages of manufacture which include primary dressed cores, secondary chipping of cores, fully dressed cores, finely polished

Table No. 10.11 : Distribution of finished beads at a glance : material wise and shape wise

Shapes	Sr. No.	Terra cotta	Glass	Agate	Chert	Quartz	Crys tal	Jasper	Carne lian	Chalc edony	Stea title	Amel hyst.	Un id stone	Fale nce	Milky quartz	Lapis lazuli	Flint	Topaz	Shell	Paste	Bone	Silver	Copper	Lead	Gold	Ivory	Shale Stone	Line Stone	Sand	Jade	Glazed	Coru ndum	Later ite	Opal	Total
Arcanuf	1	1009																																1009	
Annular	2	83	1																															84	
Short Cylinder	3	490	24	3			1	4	7	1	2		4	1						1								2						540	
Micro	4	84		15				6			19		6	1	1			1		2			3	4				1						143	
Circular	5	168	18	465			1	17	3	4	10	3	5	7	35	2			25	3		2	13	2	2	1	1			1				794	
Stud	6	12																																12	
Cubical	7		3					2					2	1		1						3												12	
Spacer	8		3	2							1		1	1																				8	
Cylinder	9	38	26	174	9	1	9	2	14	7	2	1	4	1	1					1		3						1	1					296	
Spherical	10	60	11	5	10	3	13	22	29	5	3	10	9	10	11		2			1	1		2	6			5	1			1			220	
Tubular	11	4	56	1	10				2		3		2	5					1			4												88	
Tabular	12	3	25	15	4		13	11	15	2	1	5	2	13	1	1						1												112	
Barrel	13	10	18	62	3	2	20	15	22	7	9	4	1	1	1			1				3			1		2							182	
Elliptical	14	132	3	3	1	2	3	2	1			1	2	2	1												1							154	
Disc	15	9	20		1		3	1	4			12	2	1					1			1	2					1						58	
Bicone	16	5	13		2		2	1	2			3	1	2	1																			43	
Amalaka	17	44	2		3							9	1	20	3							1												83	
Cylinder Collared	18	1	39		2			1			5	4	42							6														100	
Barrel Collared	19	18	30		3		2	2	1		6	3	3	26					1		1													96	
Tabular Collared	20	9	68	3	2			6			6	1	5	19					1															120	
Tubular Collared	21		23											4																					27
Bicone Collared	22													5																					5
Conical	23	58	1																		1	1												61	
Pendulous	24	41	5	5	1						1	1						1		5	1	29	2	5			1							98	
Multi Facetted	25	1	1		1		5	12	3		1		9	4			1					2	1								2	1		44	
Cylinder Facetted	26	2	17	4	2	2	15	3	4			3	8		3							2												65	
Triangular Barrel	27	1		1		1	23	5	2	2												1					2							37	
Barrel Facetted	28	1	7	2	1	2	22	3	1			5					1																	45	
Bicone Facetted	29		5								1	6	1																						36
Hubbed Amalaka	30		5		2						5			12	1																				25
Flat Top Drop	31		6																																6
Corn Bead	32		3																																3
Spiral	33		1	5																		3	5	1											16
Segmented	34		1	9											1						1		1				1							14	
Irregular	35						1					7																							8
Shank	36		2										1																						3
Star	37		12		1																														22
Natural	38																5																		5
Top	39										1			1									1												3
Stool	40		1																																1
Leaf	41																																		3
Mango	42																														1				1
Un Specified	31	3					3		2		1		2	2		4																			48
Total		1610	1147	316	542	16	151	118	113	28	84	66	66	196	61	11	5	1	33	17	8	7	77	3	18	7	1	15	4	1	1	3	1	2	4823

Table No. 10.12 : Layer wise distribution of finished beads on different material

Sr. No.	Shapes	Terra cotta	Glass	Agate	Chert	Quartz	Cry- stal	Jasper	Car- nelian	Chalc- edony	Stea- tite	Amet- hyst	Un id- stone	Feld- spar	Milky quartz	Lapis Lazuli	Flint	Topaz	Shell	Paste	Bone	Silver	Copper	Lead	Gold	Ivory	Shale Stone	Line Stone	Sand Stone	Jade	Glazed	Corun- dum	Luber	Opal	Total
1	(1)	67	133	43	47	1	22	12	18	1	1	13	7	8	5						1	1	11		1		2	1					1	397	
2	(2)	364	397	91	172	5	45	43	37	13	36	21	16	47	14	5	2		26	3	1	4	27	2	4			5	1			1	1	1403	
3	(3)	494	369	79	158	6	36	22	25	10	23	15	15	123	37	2	1				8	2	1	22	1	7	1	1	3	1	1	2		1466	
4	(4)	389	216	79	142	4	19	20	12	2	15	6	21	87	2	1	1	1	1		2	2		11		4	2	5	1			1		1045	
5	(5)	101	18	22	23		12	8	8	1	6	6	5	27	2	3					2	1		4		2	3							254	
6	(6)	62	4				4	2	4	1	1			4	1		1		2				1	1										88	
7	(7)	37		1			2	3	5		2	4	2							1			1			1								59	
8	(8)	25					3	1	1			1																						31	
9	(9)	16					2	1	1									1																21	
10	(10)	6					2	1	1																										10
11	(11)	14					3	1	4																										22
12	(12)	6		1				1	1																										9
13	(13)	1					1	1											5															8	
14	(14)							1																											1
15	(15)	6						1																											7
16	(16)	1																																	1
17	(17)	1																																	1
Total		1610	1137	316	542	16	151	118	117	28	84	66	66	296	61	11	5	1	33	17	8	7	77	3	16	7	1	15	4	1	1	3	1	2	4823

Table No. 10.13 : Number of finished beads at a glance : material wise and shape wise

Sr. No.	Shapes	Terra cotta	Glass	Agate	Chert	Quartz	Cry stal	Jasper	Carn elian	Chalc edony	Stee lite	Amet hyst	Un id stone	Fals e noce	Milky quartz	Lapis Lazuli	Flint	Topaz	Shell	Paste	Bone	Silver	Copper	Lead	Gold	Ivory	Shale	Line Stone	Sand Stone	Jade	Glazed	Coru ndum	Liter Ita	Oyal	Total	
1	Ancient	1000																																	1000	
2	Annular	83	1																																84	
3	Short Cylinder		490	24	3		1	4	7	1	2		4	1						1								2							540	
4	Micro		84	15				6			19		6	1	1		1			2			3	4				1							143	
5	Cicular	5	168	18	465		1	17	3	4	10	3	5	7	35	2			25	3		2	13	2	2	1	1			1		1			794	
6	Stud	12																																	12	
7	Cubical	3						2					2	1		1							3												12	
8	Spacer	3	2								1		1	1																					8	
9	Cylinder	38	26	174	9	1	9	2	14	7	2	1	4	1	1					1		3						1	1						295	
10	Spherical	60	11	5	10	3	13	22	29	5	3	10	9	10	11		2			1	1	2		6				5	1		1			220		
11	Tubular	4	56	1	10				2		3		2	5					1			4													88	
12	Tabular	3	25	15	4		13	11	15	2	1	5	2	13	1	1						1													112	
13	Barrel	10	18	62	3	2	20	15	22	7	9	4	1	1	1		1		1			3				1		2							182	
14	Elliptical	132	3	3	1	2	3	2	1			1	2	2	1														1						154	
15	Disc	9	20		1		3	1	4			12	2	1						1		2							1						56	
16	Bicone	5	13		2		2	1	2			3	1	2	1																				33	
17	Amalak	44	2	3							9		1	20	3							1													83	
18	Cylinder Collared	1	39		2			1			5		4	42																					100	
19	Barrel Collared	18	30		3		2	2	1		6	3	3	126						1		1													196	
20	Tabular Collared	9	68	3	2			6			6	1	5	19					1																120	
21	Tubular Collared		23											4																						27
22	Bicone Collared													5																						5
23	Conical	58	1																		1		1												61	
24	Pendulous	41	5	5	1							1	1						1		5	1	29	2	5			1							98	
25	Multi Facetted	1	1		1			5	12	3		1		9	4		1					2		1											44	
26	Cylinder Facetted	2	17	4	2	2	15	3	4			3	8		3							2													65	
27	Triangular Barrel	1			1		23	5	2	2												1					2								37	
28	Barrel Facetted	1	7	2	1	2	22	3	1			5						1																	45	
29	Bicone Facetted		5				4	15	3	5	1	6	1																						40	
30	Hubbed Arakata	5			2						5				12	1																				25
31	Flat Top Drop	6																																		6
32	Corn Bead	3																																		3
33	Spiral	1	5												1							3	5	1											16	
34	Segmented	1	9												1						1		1				1								14	
35	Irregular						1				7																									8
36	Shank	2											1																							3
37	Star	12			1										9																					22
38	Natural																		5																	5
39	Top										1				1											1										3
40	Stool	1																																		1
41	Leaf																																			3
42	Mango																													1						1
43	Un Specified	31	3				3	2		1			2	2		4																				48
Total		1610	1137	316	542	16	151	118	117	28	64	66	66	206	61	11	5	1	33	17	8	7	77	3	18	7	1	15	4	1	1	3	1	2	4823	

Table No. 10.14 : Number of finished beads at a place distributed layer wise and shape wise

LAYERS																			
Sr. No.	SHAPES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	Total
1	Aracanut	44	272	339	225	47	36	18	12	4	4	8							1009
2	Annular		4	4	8	22	8	6	9	12	1	6	2	1		4			84
3	Short Cylinder	51	192	176	112	7	1				1								540
4	Micro	18	52	37	26	9		1											143
5	Circular	73	248	252	190	27	1	1			1	1							794
6	Stud		3	4	5														12
7	Cubical	4	5		2	1													12
8	Spacer	1	3	2	1	1													8
9	Cylinder	30	85	72	76	24	4	2	1	1				1					295
10	Spherical	27	55	56	44	16	6	7	2	1			1						220
11	Tubular	15	33	18	17	4		1											88
12	Tabular	9	40	30	22	7	3	1											112
13	Barrel	22	67	42	29	8	6	5	1			1	1						182
14	Elliptical	14	40	45	34	12	4	3		1							1		154
15	Disc	6	22	14	9	5					1				1				58
16	Bicone	4	7	10	8	4													33
17	Arnulaka	4	29	24	18	6	2												83
18	Cylinder Collared	8	26	36	25	3	2												100
19	Barrel Collared	9	44	68	54	17	2	2											196
20	Tabular Collared	4	38	46	29	3													120
21	Tubular Collared	3	4	16	4														27
22	Bicone Collared			3	2														5

cont. on next page

Table No. 10.15 : Number of finished beads at a glaze distributed layer wise and shape wise

LAYERS																			
Sr. No.	SHAPES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	Total
23	Conical	1	6	28	18	1	3	2	1		1								61
24	Pendulous	10	17	33	21	9	3	4		1									98
25	Multi Facetted	4	14	12	9	2	1	1								1			44
26	Cylinder Facetted	5	22	20	11	6	1												65
27	Triangular Barrel	8	12	6	3	2	1			2		3							37
28	Barrel Facetted	10	17	8	5	2	1	2											45
29	Bicone Facetted	2	10	15	6	2	1	2	2										40
30	Hubbed Armlaka		7	12	6														25
31	Flat Top Drop		3	1	1		1												6
32	Cow Bead			1		1		1											3
33	Spiral	4	8	2		2													16
34	Segmented	3	2	4	5														14
35	Irregular		6	2															8
36	Shank			2	1														3
37	Star	1	4	8	4	5													22
38	Natural													5					5
39	Top		2		1														3
40	Stool				1														1
41	Leaf	1	1	1															3
42	Mango			1															1
43	Un Specified	2	7	16	13	9	1												48
Total		397	1403	1466	1045	254	88	59	31	21	10	22	9	8	1	7	1	1	4823

and undrilled beads and followed by finished stage of beads, at times, partially drilled stage and sometimes fully drilled. Due to faulty drilling some specimens are damaged. This is caused sometimes due to the quality of the raw material and at times due to the overlap of holes drilled from either ends.

A sizable number of stone slabs bearing parallel grooves have been identified as bead polishers. These grooves have been formed due to constant rubbing of the stone beads against them to get a polished finish. Majority of bead polishers are of sandstone having desirable quality which helps in rubbing beads against inherent sand particles to achieve the polish.

B. ETCHED BEADS

The site has reported 26 etched beads. An unfinished etched carnelian bead with a partially drilled hole reveals that etching was done before undertaking the process of drilling. The designed elements consist of geometrical and decorative designs; a few of them are of religious purport.

Apparently the antiquity of etching being an indigenous craft dates back to the Harappan period. Examples of the Harappan etched beads have been reported from contemporary Sumerian sites. Even etching of beads was in vogue until recently in some parts of the Indian subcontinent.

The technique of etching where the pattern appears in white on the natural colour of the stone is obtained with carbonate of soda or some other alkali by heating it until it gets red. The process of heating produce chemical changes in the material and thus the soda settles into the carved surface in the form of minute opaque white substance. "The coefficient of expansion of the material is so altered that the white layers sometimes flakes off owing to the strain caused by continual change in temperature which accounts for beads of this type being originally described as

inlaid."¹ In order to draw black etching pattern on natural colour stone, the entire surface was treated with alkali followed by the process of drawing pattern treated with metal nitrate of copper or iron before firing the bead².

The technology described above appears to have been followed at Adam. The specimens of white etching and black etching have been retrieved at the site from period V.

The etched beads from Adam are of the following shapes, spherical, barrel, elliptical, disc, cylindrical, bicone, tabular etc. Out of twenty six etched beads two each are attributed to period III and IV, while the rest period V.

The site will be remembered for its finding of a truncated bicone carnelian etched bead which depicts on the obverse a moving humped bull with raised tail towards a leafless linear tree in railing surrounded by random dots and the reverse show a circle with pellet, supporting four half crescent motifs drawn in cardinal direction. The surrounding space is filled with dots. The design element etched on the bead indicate religious purport of Buddhist origin. Incidentally, it has been reported from the cuttings of stupa at ADM-2. Such kind of figural etching is rarest of the rare. One etched specimen depicting a bird has been reported from Bhita. All the 26 etched beads are illustrated below:

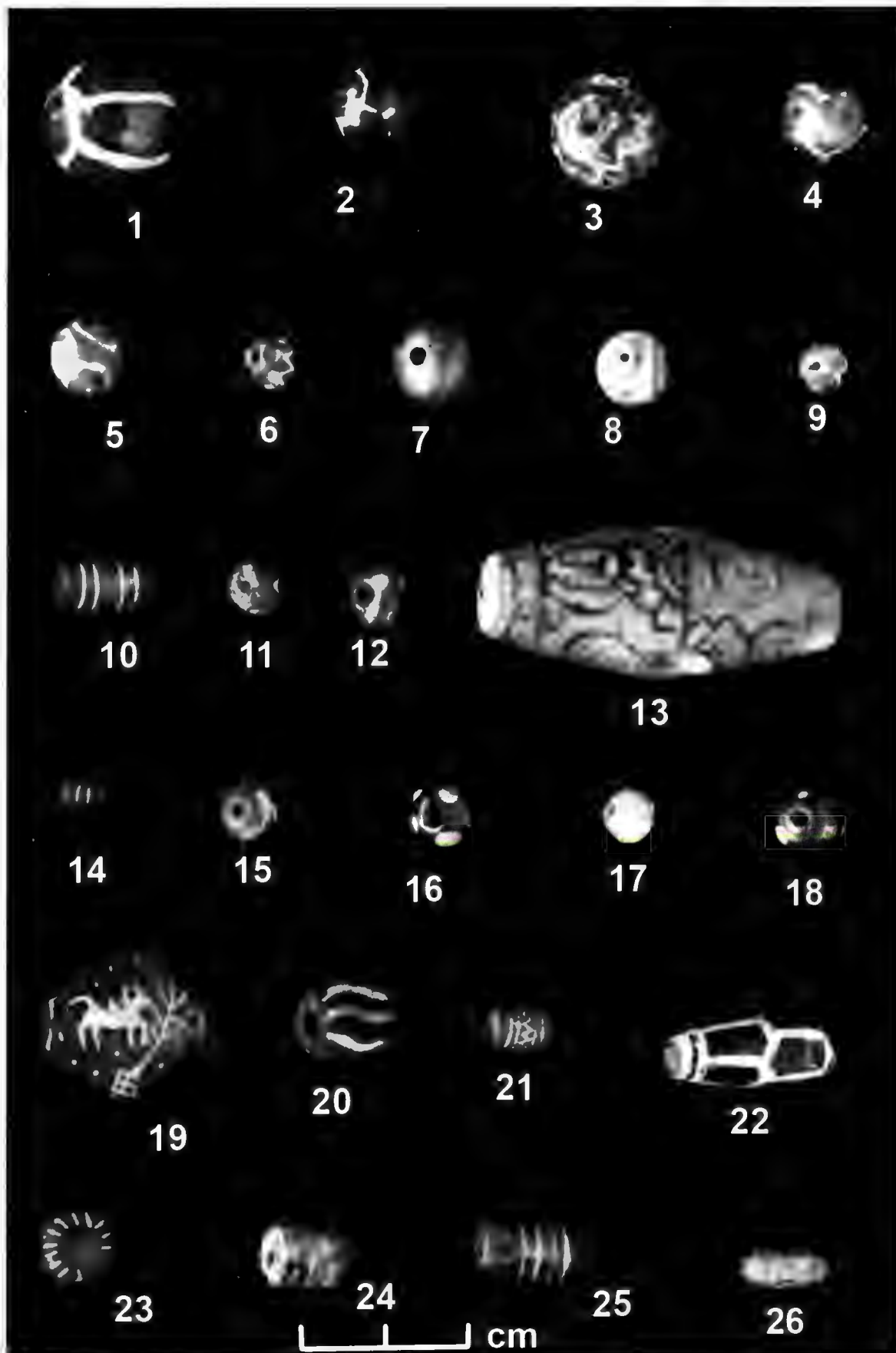
(Pl. 10.1; Fig. 10.1)

1. Spherical bead, damaged, black jasper, white etching having circular peripheral line around the holes interconnected with longitudinal lines, period V, Reg. No. 5930.

2. Spherical bead, damaged, black jasper, white etching having circular line around the holes interconnected by

1. M.S. Vats, *Excavations at Harappa*, p. 401.

2. M.G. Dikshit, *Etched Beads in India*, Deccan College, Poona, 1949, p. 10.



Pl. 10.1 : Etched beads

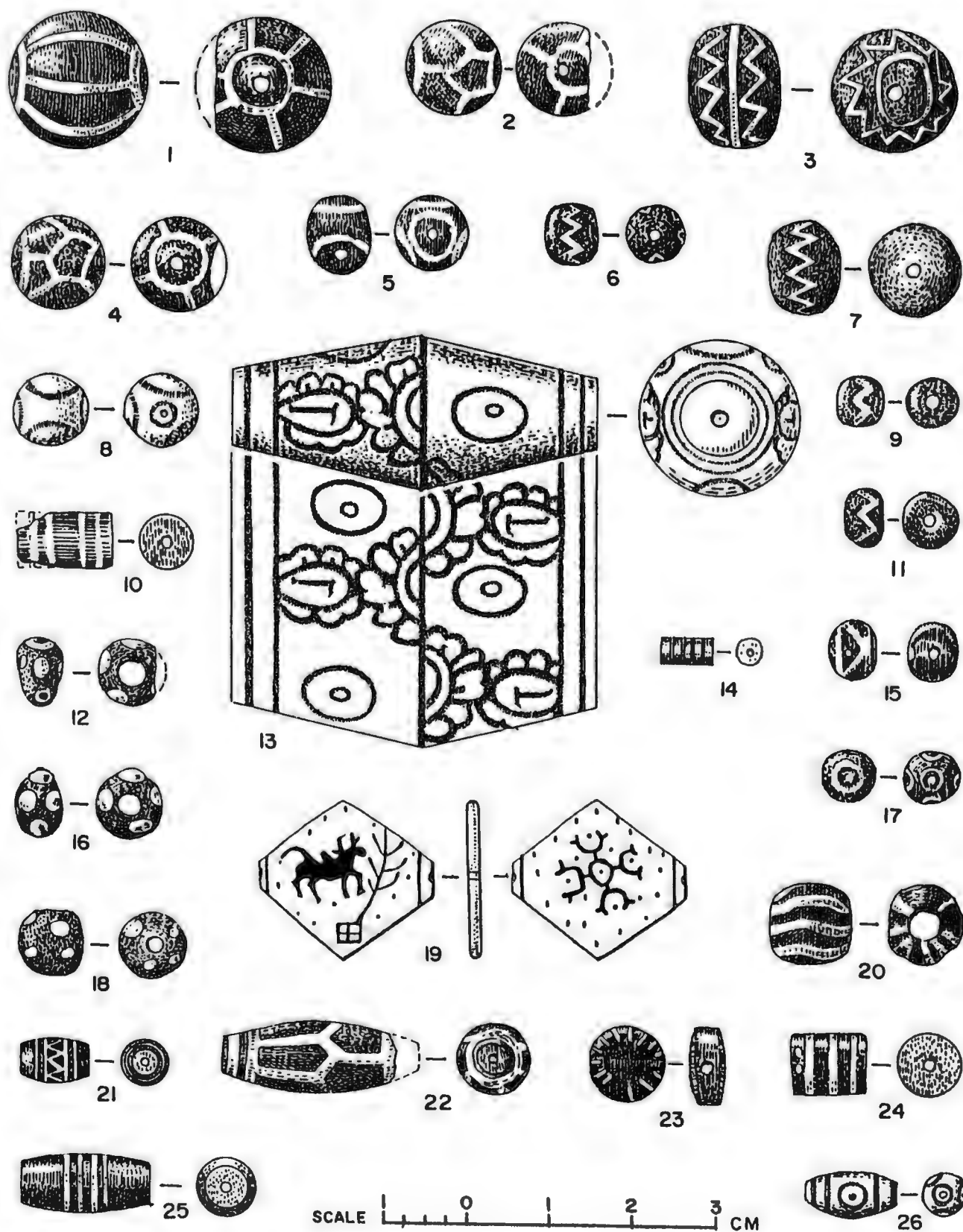


Fig. 10.1 : Etched beads

pentagonal patterns, period V, Reg. No. 11112.

3. Elliptical bead, carnelian, white etching having three parallel lines around the body with two zigzag lines in between them, period V, Reg. No. 8748.

4. Spherical bead, damaged, black jasper, white etching having circular line around the holes interconnected by pentagonal patterns, period V, Reg. No. 11670.

5. Elliptical bead, carnelian, white etching having circular line around the holes and three circles with a dot at its centre on the body, period V, Reg. No. 12701.

6. Elliptical bead, rough finish, carnelian, white etching having zigzag line all around the body, period V, Reg. No. 6294.

7. Elliptical bead, carnelian, white etching having zigzag band across the body, period V, Reg. No. 1679.

8. Spherical bead, carnelian, black etching having circles around the holes and three circles on the body, period V, Reg. No. 11983.

9. Spherical bead, carnelian, white etching having zigzag line across the body, period V, Reg. No. 11833.

10. Cylindrical bead, damaged, carnelian, white etching having four transverse parallel lines across the body, period V, Reg. No. 1713.

11. Elliptical bead, carnelian, white etching having zigzag line across the body, period V, Reg. No. 1877.

12. Irregular spherical, blue glass bead, damaged, having white "eye" type dots etched over the body, period V, Reg. No. 2211.

13. Bicone truncated, burnt carnelian, damaged, black etched with two parallel lines each at the tips and one around the centre with floral patterns repeated in between on either side, period V, Reg. No. 8294.

14. Cylindrical, carnelian, white etching having four parallel lines around the body, period V, Reg. No. 12303.

15. Elliptical, carnelian, unfinished bead, holes not fully drilled which show the practice of etching before drilling, white etching, parallel lines on ends interconnected by zigzag lines, period V, Reg. No. 12206.

16. Elliptical bead, carnelian, white etching having white "eye" type dots etched over the body, period III, Reg. No. 1129.

17. Spherical bead, carnelian, white etching having two circles around the holes and four more on the body with dots inside, period V, Reg. No. 12859.

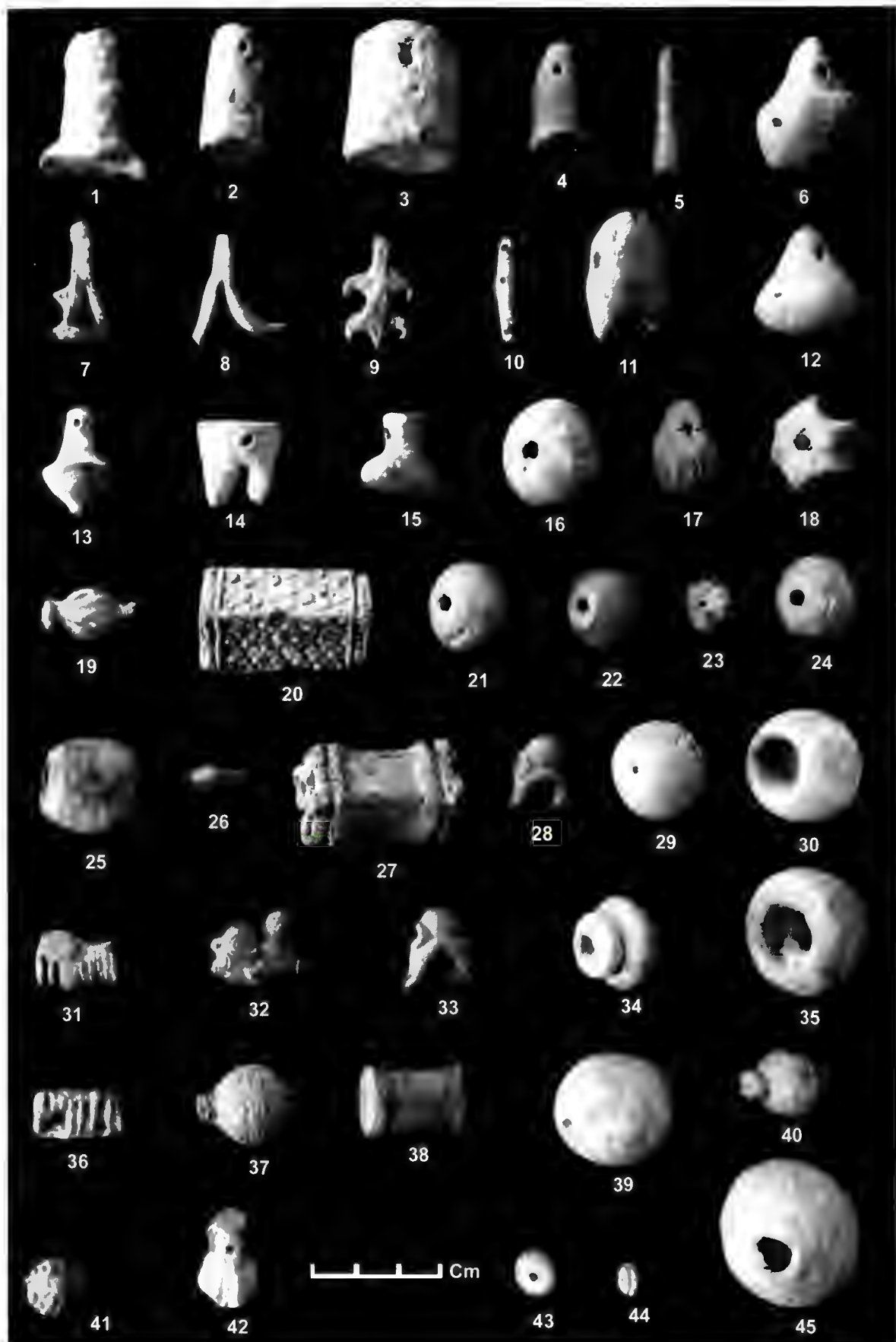
18. Roughly spherical bead, green glass, white "eye" type dots etched over the body, period V, Reg. No. 10163.

19. Flat bicone truncated, carnelian, white etching showing on the obverse a moving humped bull with a raised tail in front of a tree in railing and random dots around, and on reverse a circle with pellet, supporting four half crescent motifs drawn in cardinal direction, period V, Reg. No. 293.

20. Barrel bead, paste, fragile, white etching having parallel wavy lines from one end to other, period V, Reg. No. 12321.

21. Barrel bead, carnelian, white etching having a zigzag band in the centre flanked by two parallel lines, period IV, Reg. No. 4528.

22. Barrel bead, agate, damaged, white etching having two sets of parallel lines on either ends with pentagon patterns



Pl. 10.2 : Terracotta beads and pendants

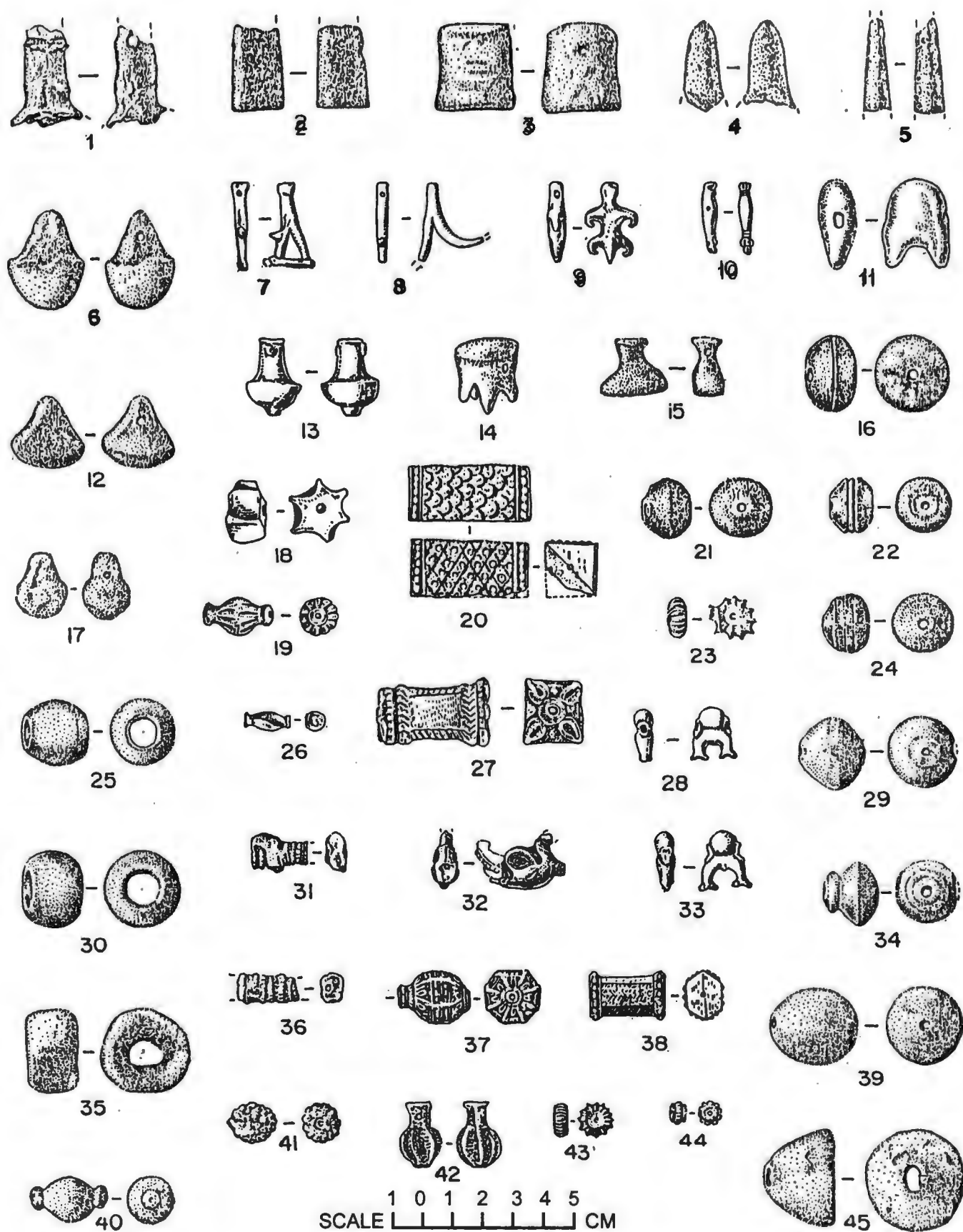


Fig. 10.2 : Terracotta beads and pendants

interconnecting them, period V, Reg. No. 13067.

23. Tabular bead, carnelian, white etching having small radial dashes from the periphery towards the centre on either side of the bead, period III, Reg. No. 13492.

24. Cylindrical bead, carnelian, white etching having four parallel lines around the body, period IV, Reg. No. 13581.

25. Barrel bead, carnelian, white etching having four parallel lines around the body, period V, Reg. No. 13581.

26. Barrel bead, chert, grey colour, black etching having three parallel lines, one on one end and two on the other with three circles having a dot inside in between, period V, Reg. No. 6337.

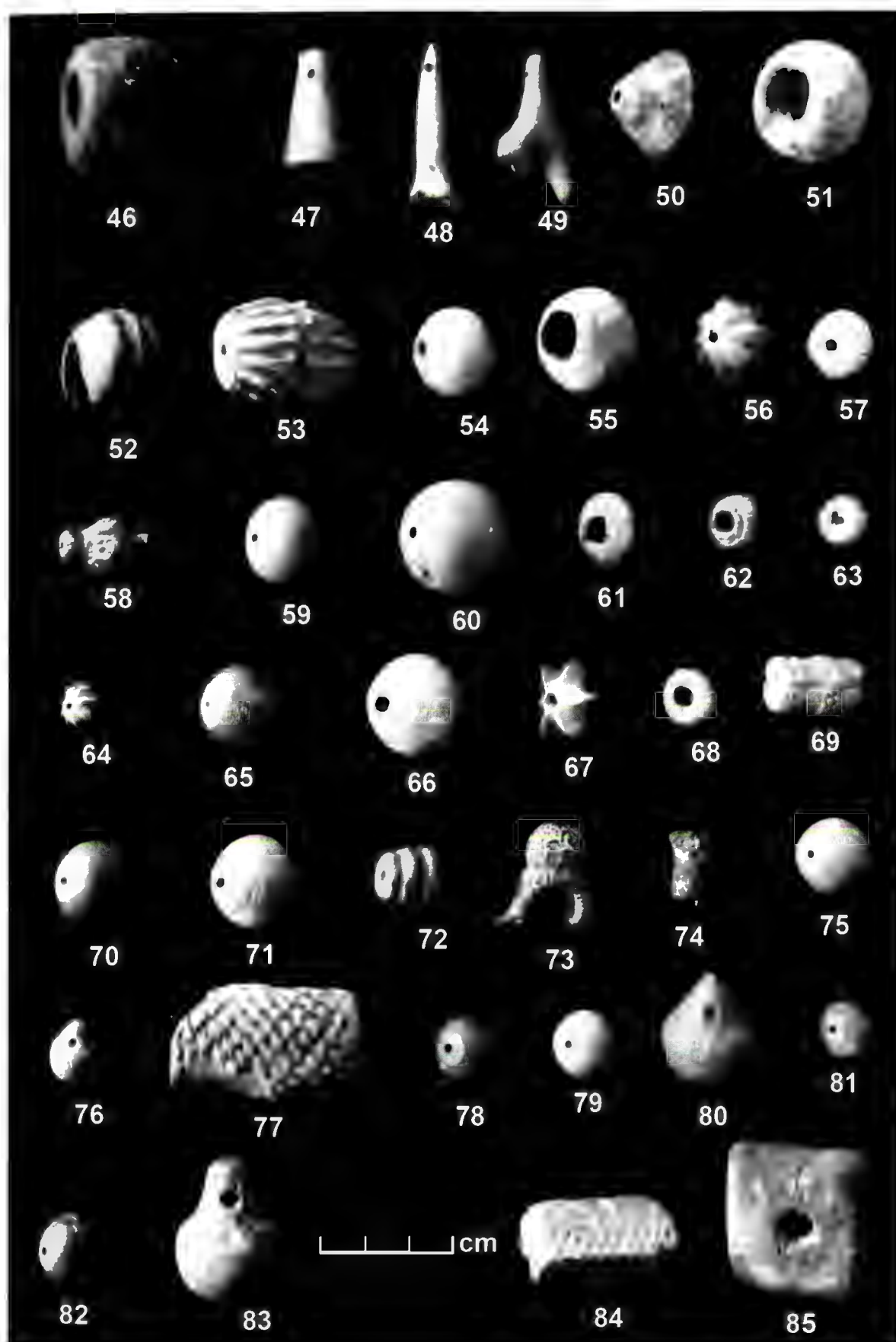
C. TERRACOTTA BEADS

Clay as medium of bead making has been preferred since Neolithic period onwards. The plasticity of clay has contributed in shaping a wide range of beads of handmade, wheel turned, moulded varieties. The site has reported a variety of well fired terracotta beads out of which areca nut shape outnumbers, but the moulded variety outshines. The bead makers have preferred lavigated clay, at times mixed with mica for adequate firing of the bead. There are evidences of moulds indicating local manufacture. Incidentally, while removing the baulk between the cuttings of trench no. B5 and C5, a kiln sealed by layer 2 was noticed, which has yielded a moulded spacer bead (Reg. No. 11209) supporting onsite production of terracotta beads. There are regular types of beads while a few are of auspicious nature like *shrivatsa*, *Indradhwaja*, *triratna*, *makaramukha* etc. Some of the best specimens are illustrated below.

(Pl. 10.2, 10.3; Fig. 10.2, 10.3)

1. Irregular stud with flared base, pendulous, damaged transverse hole, period V, Reg. No. 1330.
2. Pendulous stud, transverse hole, period V, Reg. No. 1142.
3. Pendulous stud, transverse hole, period V, Reg. No. 1182.
4. Conical pendulous, transverse hole, period V, Reg. No. 798.
5. Thin cylindrical pendulous, transverse hole, period V, Reg. No. 947.
6. Drop shaped, transverse hole on top, period V, Reg. No. 903.
7. *Indradhwaja* shaped inverted pendant with a hole on the extended top, cylindrical frame, period V, Reg. No. 11084.
8. Inverted 'Y' shaped pendant of *ankusha* (goad) type with a transverse hole on top, period V, Reg. No. 7678.
9. Inverted *shrivatsa* shaped pendant with a hole on top, period V, Reg. No. 11085.
10. Barrel with knotted pattern, ends with a transverse hole across the centre and one at upper end, spacer bead, period V, Reg. No. 11074.
11. Modestly shaped *triratna* amulet like pendant with a semi circular top and triangular cut end, period V, Reg. No. 10777.
12. Drop shaped, enlarged bulbous body, period V, Reg. No. 418.
13. Pendulous but lower part more like a top with a button projection below, period V, Reg. No. 6853.
14. Four legged stool shaped, circular transverse hole, period V, Reg. No. 922.

15. Flattened stamp shaped, transverse hole above, period V, Reg. No. 1017.
16. Elliptical with a groove across the body, period V, Reg. No. 1081.
17. Drop shaped, bulbous base, period V, Reg. No. 948.
18. Irregular star shaped, thick, period V, Reg. No. 8350.
19. Barrel collared, grooved body, period V, Reg. No. 11258.
20. Moulded rectangular with a square section having patterns consisting of obliquely arranged pellets within a rhombus block repeated on opposing faces, both the ends bear beaded band, damaged spacer bead, period V, Reg. No. 11169.
21. Elliptical, double grooved across the body, period IV, Reg. No. 401.
22. Elliptical with two parallel deep grooves along the body running around, period V, Reg. No. 178.
23. *Amalaka* shaped, period V, Reg. No. 642.
24. Elliptical, two parallel grooves across the body, period V, Reg. No. 190.
25. Barrel, annular bead, period III, Reg. No. 516.
26. Small barrel with collars on either ends, period V, Reg. No. 7813.
27. Square cylindrical moulded spacer bead, beaded decorative patterns repeated on all sides; both the end faces bear quadrified pellets, period V, Reg. No. 11209.
28. Inverted *triratna* amulet, transverse hole on top, period V, Reg. No. 6538.
29. Bicone bead, period III, Reg. No. 471.
30. Barrel, annular bead, period IV, Reg. No. 994.
31. Grooved cylindrical with a thickened end, period V, Reg. No. 1290.
32. *Makaramukha* pendant, damaged, period V, Reg. No. 11068.
33. Inverted *triratna* amulet, transverse hole on top, period V, Reg. No. 7677.
34. Horizontal *ghata* shaped, period V, Reg. No. 1273.
35. Cylindrical annular, period V, Reg. No. 1273.
36. Irregularly grooved cylindrical, period V, Reg. No. 1290.
37. Moulded faceted barrel with one collar, beaded band in the centre and faceted ends decorated, period V, Reg. No. 9585.
38. Moulded hexagonal cylindrical with thickened collared ends having dot patterns around, period V, Reg. No. 8380.
39. Globular bead, crudely made, period V, Reg. No. 1168.
40. Barrel collared, period IV, Reg. No. 534.
41. Multi knobbed spherical, period V, Reg. No. 876.
42. Vase shaped with transverse hole on top, decorated body, period V, Reg. No. 11233.
43. Small *amalaka* shaped, period V, Reg. No. 1340.
44. Small *amalaka* shaped with collars, period V, Reg. No. 299.
45. Areca nut shaped with a flat end, period V, Reg. No. 1071.



PI. 10.3 : Terracotta beads and amulet

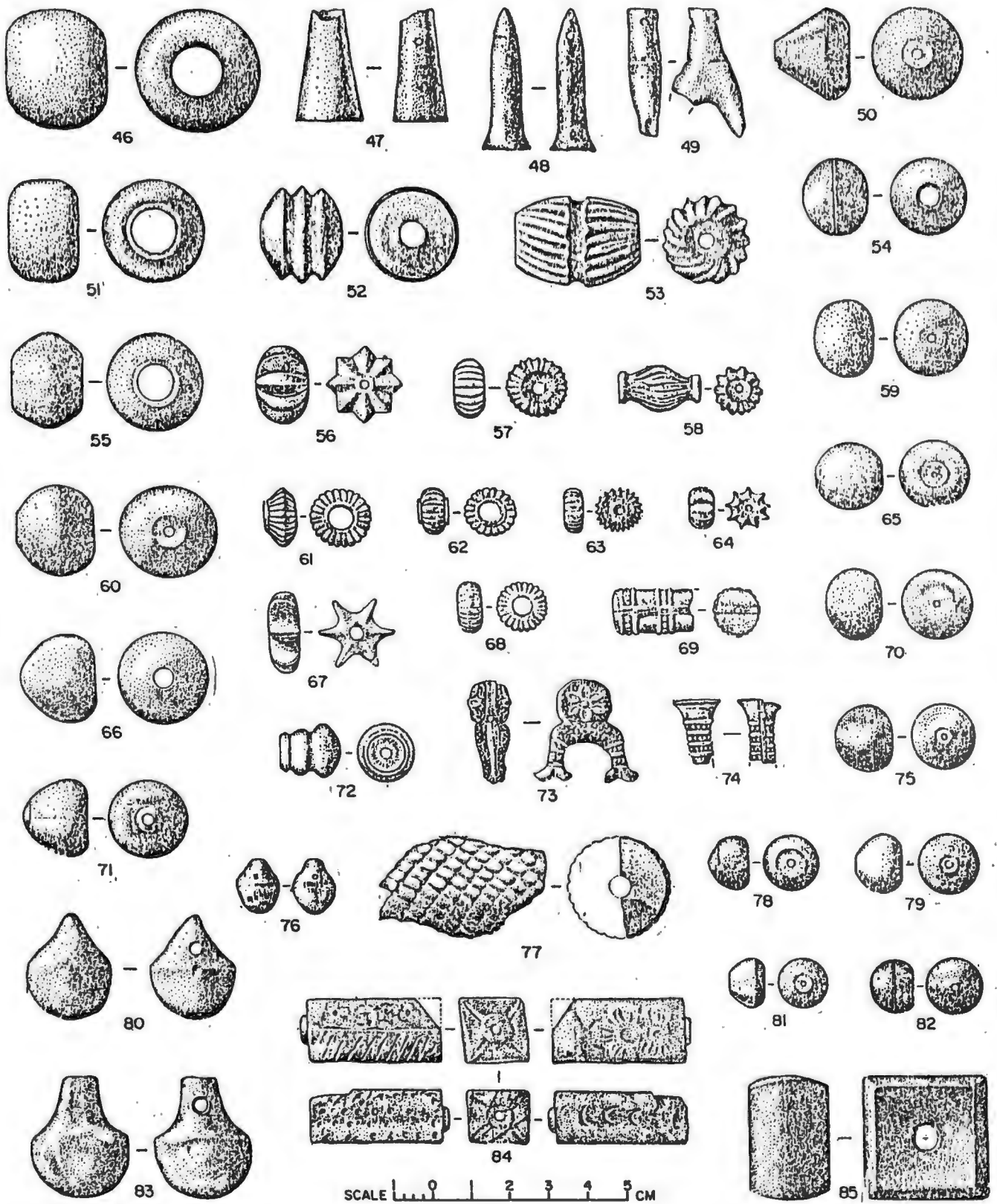


Fig. 10.3 : Terracotta beads and amulet

(Pl. 10.3; Fig 10.3)

46. Annular bead, period IV, Reg. NO. 4418.
47. Conical pendulous bead, damaged top, period V, Reg. No. 6685.
48. Conical pendulous bead, pointed top, period V, Reg. No. 3420.
48. Conical pendulous bead, pointed top, period V, Reg. No. 3420.
49. Pendulous bead of *ankusha* (goad) type, period V, Reg. No. 5348.
50. Areca nut shaped bead, period IV, Reg. No. 12959.
51. Annular bead, period III, Reg. No. 9955.
52. Collared circular bead, period V, Reg. No. 7605.
53. Barrel shaped bead with a central groove across the body and series of longitudinal grooves on either sides, period V, Reg. No. 11447.
54. Elliptical bead, with a central groove across the body, period V, Reg. No. 7488.
55. Annular bead, period III, Reg. No. 12427.
56. *Amalaka* shaped bead, period V, Reg. No. 8405.
57. *Amalaka* shaped bead, period V, Reg. No. 5728.
58. Collared barrel shaped bead with longitudinal grooves on the body, period V, Reg. No. 12488.
59. Elliptical bead, period V, Reg. No. 6405.
60. Areca nut shaped bead, period V, Reg. No. 7675.
61. Bicone longitudinally grooved bead with one collar, period V, Reg. No. 3430.
62. *Amalaka* collared bead, period V, Reg. No. 12175.
63. *Amalaka* shaped bead, period V, Reg. No. 8319.
64. *Amalaka* shaped bead, nine pointed and thick, period V, Reg. No. 4447.
65. Elliptical bead, period V, Reg. No. 7447.
66. Areca nut shaped bead, period IV, Reg. No. 7073.
67. Star shaped bead six pointed, medium thick, period V, Reg. No. 3434.
68. *Amalaka* shaped bead, period V, Reg. No. 8685.
69. Cylindrical bead, decorated with three beaded bands occurring at intervals, damaged, period V, Reg. No. 11798.
70. Elliptical bead, period V, Reg. No. 5344.
71. Areca nut shaped bead, period V, Reg. No. 5838.
72. Barrel bead, multi grooved, period V, Reg. No. 7647.
73. Moulded *triratna* amulet bearing floral decorations on either sides, period V, Reg. No. 2354.
74. Moulded pendulous bead, damaged, transverse hole on top, parallel linear bands alternately filled with dots, period V, Reg. No. 3234.
75. Areca nut shaped bead, period V, Reg. No. 4263.
76. Irregular drop shaped pendulous bead, period V, Reg. No. 6388.
77. Moulded cylindrical spacer bead, decorated with rhombus motifs, period V, Reg. No. 12238.

78. Areca nut shaped bead, period V, Reg. No. 8092.

79. Areca nut shaped bead, period V, Reg. No. 7740.

80. Drop shaped bead with a ridge and bulbous base, period V, Reg. No. 7632.

81. Areca nut shaped bead, period V, Reg. No. 12085.

82. Elliptical bead with one end truncated, centrally grooved, period V, Reg. No. 6402.

83. Drop shaped bead with a very prominent ridge, bulbous base, period V, Reg. No. 6738.

84. Moulded square cylindrical bead, with collared ends, one end damaged, bearing decorative pattern on all sides, one side shows feeble traces of chevron motif, period V, Reg. No. 6155.

85. Short square barrel bead, period V, Reg. No. 4293.

D. GLASS BEADS

The antiquity of true glass bead of indigenous origin may be attributed to Chalcolithic levels at Maski, followed by the findings at Bhagwanpura, Hastinapur, Alamgirpur, Taxila, Kaushambi, Ujjain, Tripuri, Nevasa, Arikamedu, Kondapur etc., to mention a few. Evidence of large scale experiments in bead manufacturing technology start occurring from the Satavahana period at sites like Kolhapur, Kondapur, Maski, Prakash, Nevasa, Ter, Pauni etc., to mention a few. A number of sites yielding glass artifacts are located in the Ganga plain followed by upper Deccan and lower Deccan. The common glass beads are of black, green, blue and red colour. The chemical analysis carried out on some of these artifacts reveals useful results. Largely, ordinary soda-lime silicate containing some oxide of iron serves as colouring agents. Further, for obtaining

black colour, soda-lime silicate is mixed with iron oxide, for opaque red colour cuprous oxide, for liver-red colour red oxide of copper, for green colour oxide of iron (ferrous), for yellow colour ferric oxide, for purple colour manganese oxide, for blue colour copper oxide, for green colour combination of copper and lead oxide¹. The specific gravity of glasses of early Historical period generally varies from 2.25 to 2.70 and the hardness varies from 5 to 6.

Among the glass bead making techniques, winding and drawing are two most preferred methods in the early Historical period. Studies have summarized four traditional regions of glass manufacturing in India. The glass beads of upper India are identified with the findings at Ahichchhatra and Kausambi produced out of winding method. The peninsular Indian tradition has been classified at centres like Arikamedu and Karaikadu which generally followed drawing method. The third traditional centres are Kolhapur, Ter, Nevasa, Paithan in Maharashtra. The bead making of fourth tradition is distributed widely from Taxila to Ahichchhatra and Kausambi on the one hand and Peddabankur and Dhulikotta on the other. At all these traditional centres, the main colouring agents used are copper, iron and manganese². Recently, a database of distribution pattern of glass beads in India has come to light³. The above noted distribution pattern may suggest that the site of Adam may fall in the third category of bead making centres of early Historic India which may also include the neighbouring site of Pauni⁴.

1. B.B. Lal, Examination of Some Ancient Indian Glass Specimens, *AI*, 8, 1952, pp. 17-27.

2. K.K. Basa, Small is Useful: Importance of Bead Studies in South Asian Archaeology, *Indian Archaeology in Retrospect* vol. 1: *Prehistory: Archaeology of South Asia*, eds. S. Settar and R. Korisettar, Delhi, 2002, pp. 402-403.

3. Alok Kumar Kanungo, A Database of Glass and Glass Beads in India, *ME*, XXIX (1), 2004, pp. 42-102.

4. Amarendra Nath, *Further Excavations at Pauni* 1994, MASI 97, New Delhi, 1998, pp. 65-74.



Pl. 10.4 : Glass beads

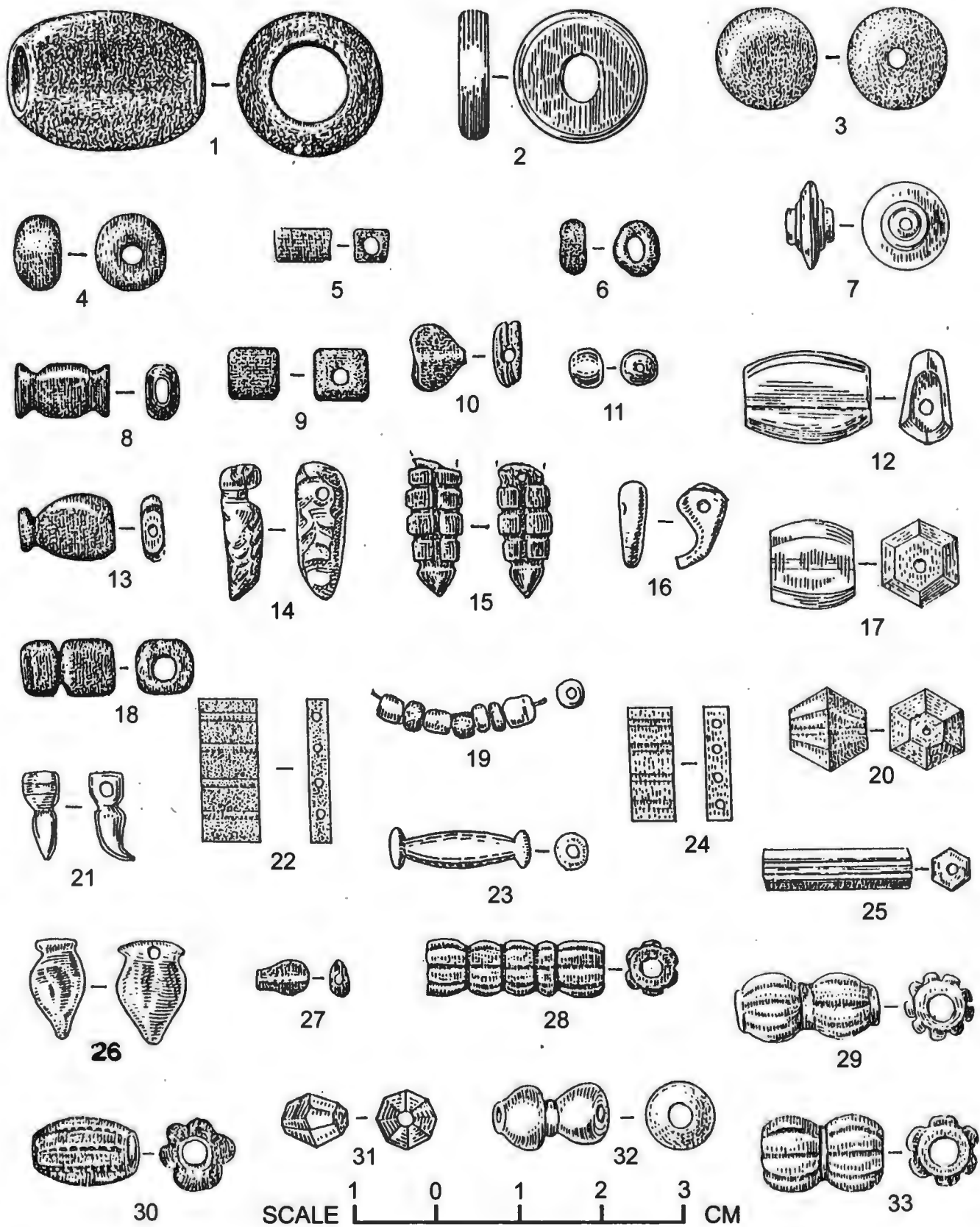


Fig. 10.4 : Glass beads

Apart from beads, the site has reported pendants, rings, bezels, kohl-sticks, spools and vessels. Below are illustrated a few selected specimens of glass beads:

(Pl. 10.4; Fig. 10.4)

1. Barrel, black coloured, well made, period V, Reg. No. 12355.
2. Circular, cobalt blue, well made, period V, Reg. No. 3363.
3. Spherical, dark blue, period V, Reg. No. 1350.
4. Disc, blue coloured, period V, Reg. No. 169.
5. Short barrel, white core and red exterior, period V, Reg. No. 8452.
6. Circular, period V, Reg. No. 1343.
7. Circular with double collared ends, blue, period V, Reg. No. 9477.
8. Barrel collared, cobalt blue, period V, Reg. No. 917.
9. Cubical Shaped, cobalt blue, period V, Reg. No. 1319.
10. Heart shape, cobalt blue, period V, Reg. No. 3391.
11. Spherical, small, period V, Reg. No. 1544.
12. Barrel facettèd and truncated well made, transparent, period V, Reg. No. 1604.
13. Flat barrel, collared, cobalt blue period V, Reg. No. 7839.
14. Irregular pendulous, period V, Reg. No. 5587.
15. Segmented pendulous, crimson colour, damaged top, period V, Reg. No. 15.
16. Claw shaped pendulous, pale green, two micro beads struck inside the hole, period V, Reg. No. 5058.
17. Barrel, hexagonal, facettèd and truncated, transparent, green, period V, Reg. No. 7418.
18. Barrel collared, cobalt blue, period V, Reg. No. 7755.
19. Short cylindrical beads strung on an iron wire, found from burial, period V, Reg. No. 1543.
20. Bicone hexagonal, facettèd, cobalt blue, well made, period V, Reg. No. 10512.
21. Claw shaped pendulous, cobalt blue, period V, Reg. No. 3793.
22. Four grooved spacer bar, well made, period V, Reg. No. 7319.
23. Barrel, collared, transparent with a golden yellow tinge, period V, Reg. No. 7419.
24. Four grooved spacer bar, cobalt blue, well made, period V, Reg. No. 12985.
25. Hexagonal, cylindrical, turquoise colour, period V, Reg. No. 41.
26. Pendulous, bulbous, with a tapering tip, pale green, well made, period V, Reg. No. 1269.
27. Leaf shaped, green, well made, period V, Reg. No. 107.
28. Barrel bearing longitudinal grooves and five segments across the body, cobalt blue, well finished, period V, Reg. No. 12320.
29. Double segment barrel with longitudinal grooves and collars on either ends and in between, cobalt blue, period V, Reg. No. 11564.
30. Barrel, beaded longitudinal grooves bedecked with band of dots, leaf green

colour, heavy, well made, period V, Reg. No. 5465.

31. Multifaceted, dark coloured well made, period V, Reg. No. 5404.

32. Bell shaped, double piece with a collar in between, period V, Reg. No. 8696.

33. Double segmented barrel with longitudinal grooves, cobalt blue, well finished, period V, Reg. No. 11934.

E. AGATE BEADS

The earliest evidence of agate beads dates back to the Harappan civilization. Both plain and banded varieties of agate have been preferred for making beads since. *The Periplus of the Erythraean Sea* refers to the export of agate from Barygaza¹. The excavations at Ujjain have reported a hoard of dressed pieces of agate kept in a pot². The *Periplus* and Ptolemy's *Geography* record the shipment of Indian beads which include black and white banded agate beads to the Mediterranean marts. Such type of beads have been found at a number of sites situated in Deccan at sites like Brahmagiri, Mahurjhari, Pauni, Paithan, Kolhapur, Ter, Nevasa, Nasik, Sopara, Prakash, Bhokardan etc., to mention a few. In this regard, Adam is not an exception.

Agate beads have been found distributed largely in Deccan because of its occurrence in the beds of the Wardha, Wainganga, Godavari, Krishna and Bhima rivers and their tributaries. The site at Adam has preferred to prepare beads on banded variety rather than plain.

A few specimens of agate beads from the site are illustrated below:

(Pl. 10.5; Fig. 10.5)

1. Barrel, well finished, period V, Reg. No. 8908.

1. Wilfred H. Schoff, (Tr.) *The Periplus of the Erythraean Sea*, New York, 1912, p. 42.

2. IAR 1956-57, pl. XXXIII, B.

2. Barrel faceted, well finished, period V, Reg. No. 4587.

3. Barrel, well finished, period V, Reg. No. 8584.

4. Barrel, well finished, period V, Reg. No. 222.

5. Barrel, well finished, period V, Reg. No. 4892.

6. Cylindrical, period V, Reg. No. 7031.

7. Cylindrical, a vein of crystal running in between, period V, Reg. No. 25.

8. Cylindrical, well finished, period V, Reg. No. 6718.

9. Barrel, well finished, period V, Reg. No. 11647.

10. Barrel, well finished, period V, Reg. No. 5919.

11. Square, cylindrical, well finished, period V, Reg. No. 854.

12. Square, cylindrical, period V, Reg. No. 670.

13. Square, tabular, well finished but damaged, period V, Reg. No. 4600.

14. Cylindrical, period V, Reg. No. 1178.

15. Cylindrical, well finished, period V, Reg. No. 9794.

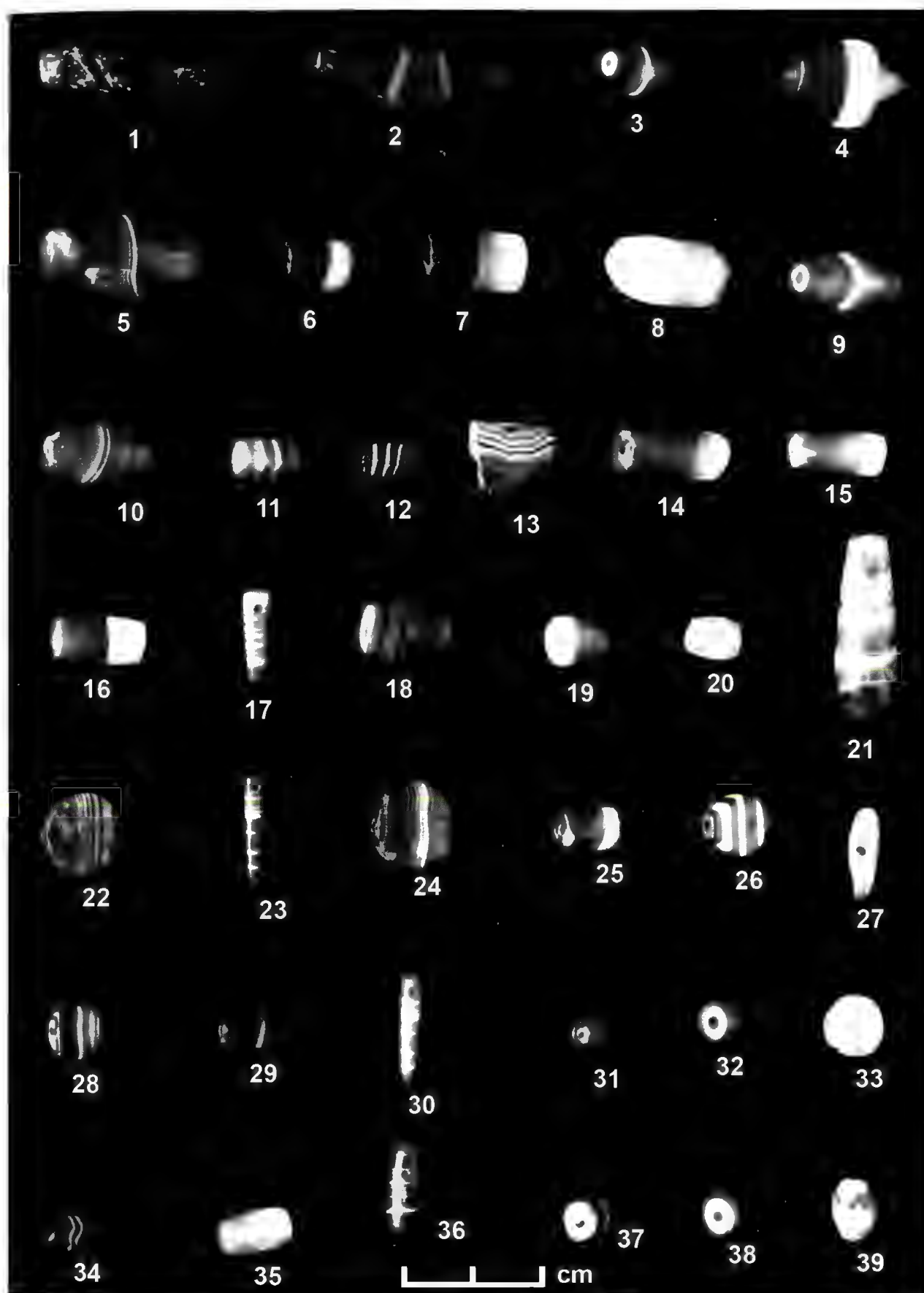
16. Barrel, period V, Reg. No. 799.

17. Pendulous with a pointed tip and transverse hole across the top, well finished, period V, Reg. No. 12646.

18. Barrel, well finished, period V, Reg. No. 9716.

19. Cylindrical, period V, Reg. No. 770.

20. Cylindrical, period V, Reg. No. 1333.



Pl. 10.5 : Agate beads

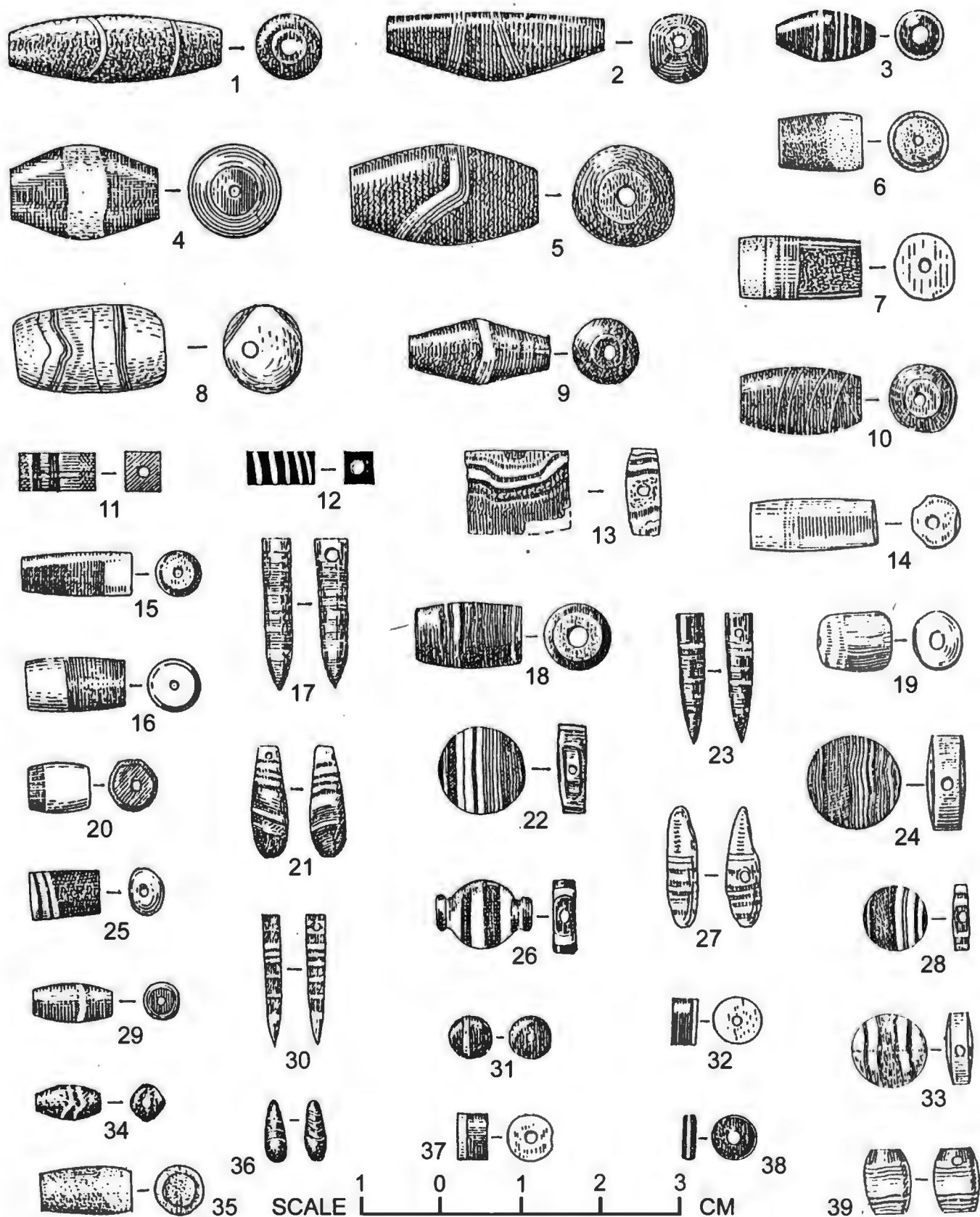


Fig. 10.5 : Agate beads

21. Drop shaped pendant with transverse hole across on top, well finished, period V, Reg. No. 11045.

22. Tabular, well finished, period V, Reg. No. 133.

23. Pendulous with a pointed tip and transverse hole across on top, well finished, period V, Reg. No. 7744.

24. Tabular, well finished, period V, Reg. No. 7125.

25. Cylindrical, period V, Reg. No. 757.

26. Bi-collared, tabular, well finished, period V, Reg. No. 5345.

27. Pendulous with a transverse hole across the centre, rough finished, period V, Reg. No. 2528.

28. Tabular, well finished, period V, Reg. No. 8576.

29. Barrel, well finished, period V, Reg. 951.

30. Pendulous with a pointed tip and a transverse hole across on top, well finished, period V, Reg. No. 6994.

31. Spherical, well finished, period V, Reg. No. 11722.

32. Short cylindrical, well finished, period V, Reg. No. 6995.

33. Tabular, well finished, period V, Reg. No. 7208.

34. Barrel, period V, Reg. No. 5363.

35. Barrel, period V, Reg. No. 7182.

36. Drop shaped with a transverse hole across on top, well finished, period V, Reg. No. 9231.

37. Short cylindrical, period V, Reg. No. 468.

38. Circular, well finished, period V, Reg. No. 13024.

39. Pendulous barrel with a transverse hole across on top, roughly finished, period V, Reg. No. 5507.

F. CHERT BEADS

Like agate, chert, a silicate stone, was also exploited for making beads from Harappan period onwards. Though the chert beads make its appearance in a limited way at Harappan sites, their occurrence in early Historical context too conspicuously remains meagre, relatively not commensurate with beads of other raw materials. In the early Historical context, the sites of Pauni, Vaishali, Rajghat, Sravasti, Nagara etc. has yielded beads of chert. A few specimens of chert beads from Adam illustrated here show relatively bigger perforation.

(Pl. 10.6; Fig. 10.6)

1. Spherical, well finished, period V, Reg. No. 5452.

2. Star shaped, thick, eight pointed, well finished, period V, Reg. No. 8766.

3. Elliptical, moderately finished, period V, Reg. No. 4448.

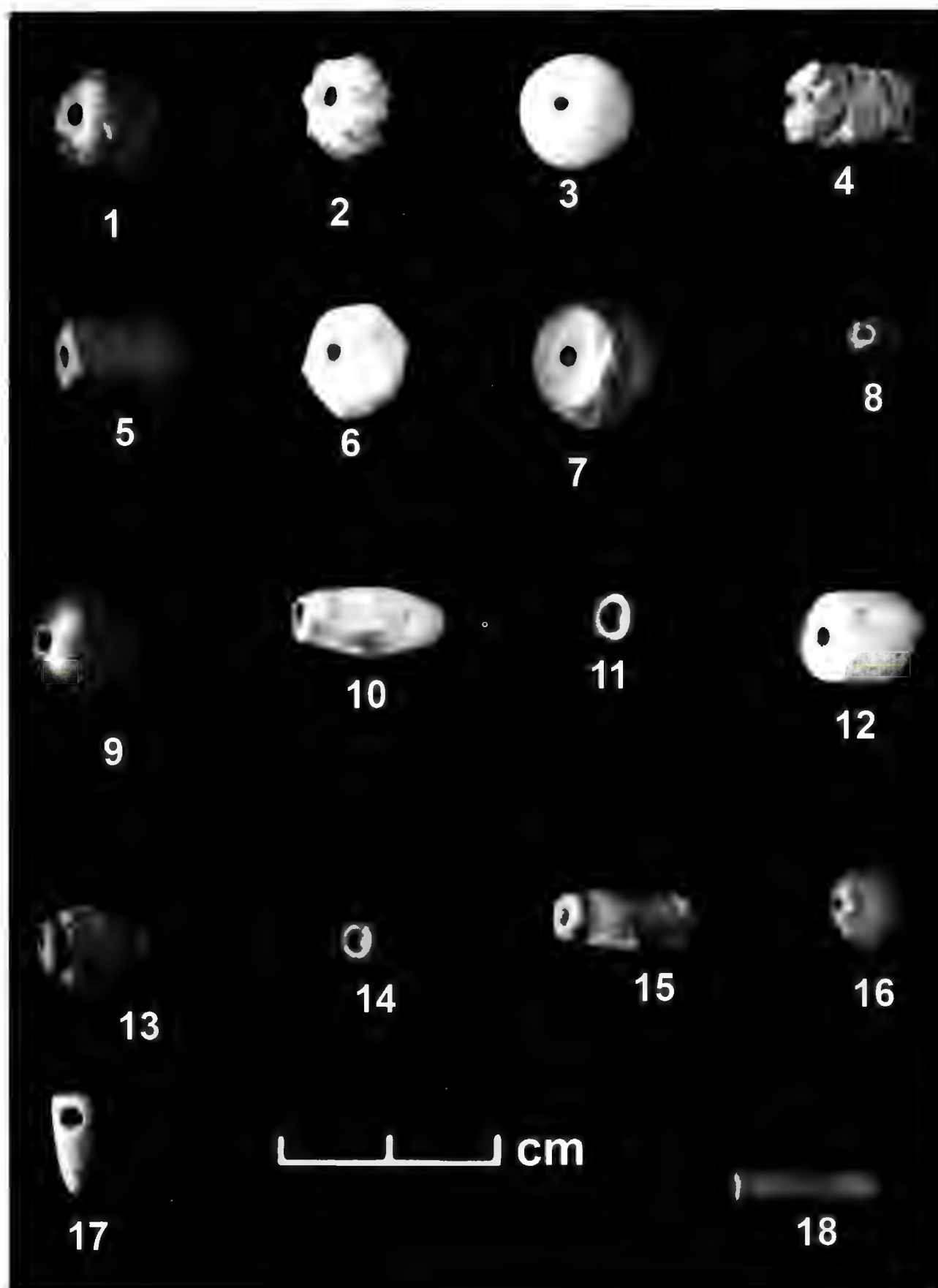
4. Quadruped animal like amulet, flat, period V, Reg. No. 8246.

5. Square, cylindrical, slightly tapering towards one end, period V, Reg. No. 2735.

6. Cubical faceted with projected corners, well finished, period V, Reg. No. 4421.

7. Bicone truncated, well finished, period V, Reg. No. 39

8. Triangular barrel, period V, Reg. No. 3670.



Pl. 10.6 : Chert beads

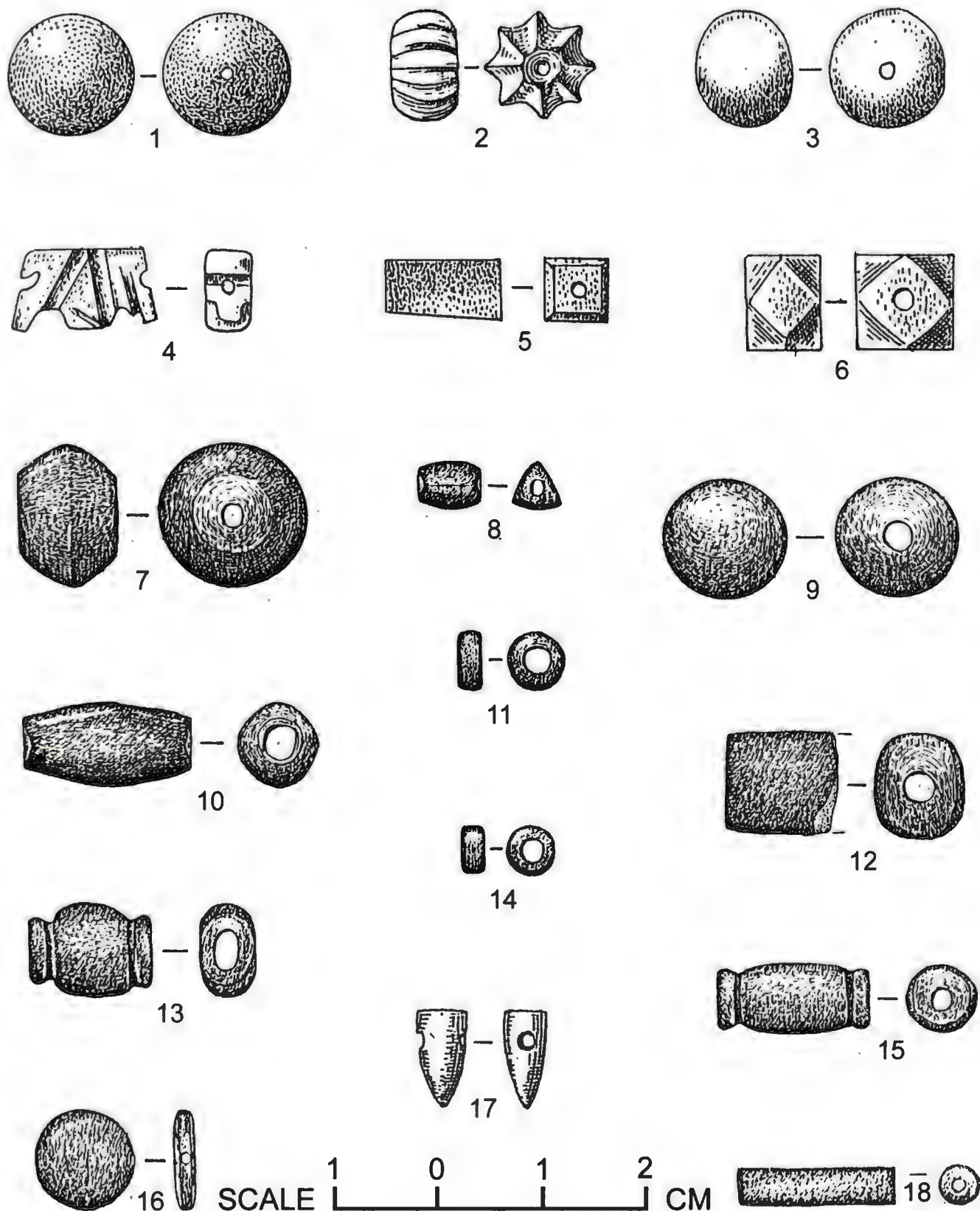


Fig. 10.6 : Chert beads

9. Spherical, big sized hole, medium finish, period V, Reg. No. 5536.
10. Barrel, big sized hole, medium finish, period V, Reg. No. 1855.
11. Circular, big sized hole, period V, Reg. No. 9171.
12. Cylindrical, one end damaged, period V, Reg. No. 4663.
13. Flat barrel collared, big size hole, period V, Reg. No. 1768.
14. Circular, big sized hole, period V, Reg. No. 9130.
15. Barrel collared, period V, Reg. No. 3995.
16. Tabular, well finished, period V, Reg. No. 1947.
17. Pendulous, inverted conical, period V, Reg. No. 6820.
18. Long cylindrical, period V, Reg. No. 3915.

G. CRYSTAL BEADS

Though the crystal beads are sparse in the Harappan context, their number increases in the early Historical frame of reference. It is stated that the Romans preferred Indian crystal over the Alps¹. The source of crystal has been located in Gujarat, Orissa, Bihar, Tamil Nadu, Rajasthan, and Maharashtra². The site of Adam has yielded larger quantities of crystal beads and pendants as compared to the other sites of Maharashtra like Nasik, Kolhapur, Paithan, Nevasa, Prakash, Pauni, Mahurjhari and Tekkalghat etc. The probable explanation for the higher percentage of crystal finds at the site may be the location of raw material in the

near neighbourhood³. Some of the specimens made of crystal are described below with an exception of jade, an imported material, at Sl. No. 28.

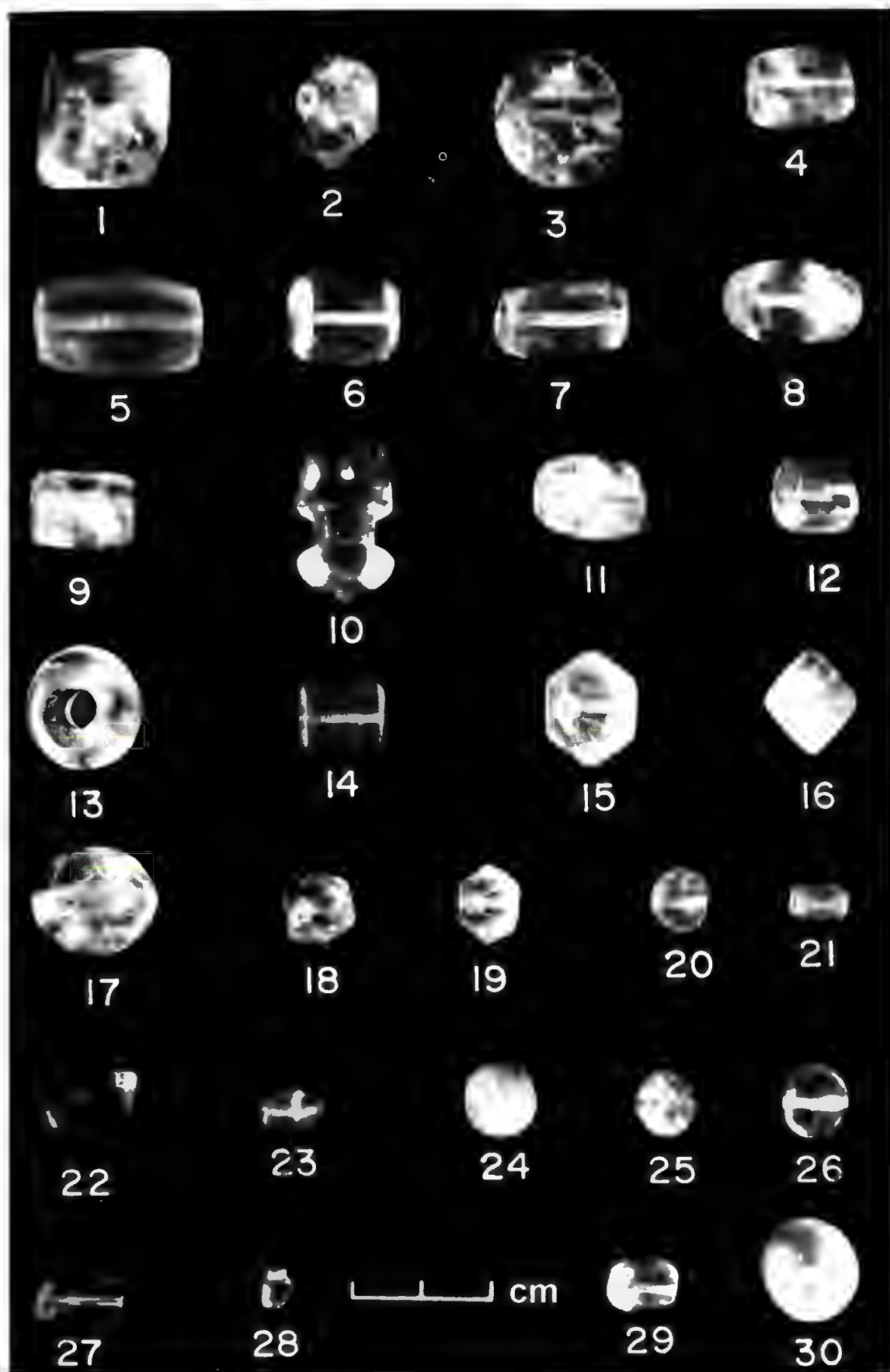
(Pl. 10.6; Fig. 10.6)

1. Square, faceted, well finished, period V, Reg. No. 8120.
2. Hexagonal bicone, period V, Reg. No. 697.
3. Tabular, well finished, period V, Reg. No. 10069.
4. Barrel, faceted, well finished, period V, Reg. No. 13572.
5. Barrel, faceted, hexagonal, well finished, period V, Reg. No. 9580.
6. Cylindrical, faceted, hexagonal, well finished, period V, Reg. No. 9959.
7. Cylindrical, faceted, hexagonal, well finished, period V, Reg. No. 10153.
8. Barrel, faceted, hexagonal, well finished, period V, Reg. No. 5573.
9. Cylindrical, faceted, period V, Reg. No. 1327.
10. Truncated pendant having hemispherical pointed base, conical upper portion bears transverse perforation, well finished, period V, Reg. No. 2917.
11. Barrel, faceted, pentagonal, period V, Reg. No. 491.
12. Cylindrical, faceted, well finished, period V, Reg. No. 6241.
13. Circular, well finished, period V, Reg. No. 10385.
14. Cylindrical, faceted, hexagonal, well finished, period V, Reg. No. 13596.
15. Hexagonal, bicone, well finished, period V, Reg. No. 8682.

1. E.H. Warmington, *The Commerce Between the Roman Empire and India*, Cambridge, 1928, pp. 245-46.

2. J. Coggin Brown and A.K. Dey, *India's Mineral Wealth*, Oxford, 1955, pp. 625-26.

3. Wheeler, *op. cit.*, pp. 122-23.



Pl. 10.7 : Crystal beads

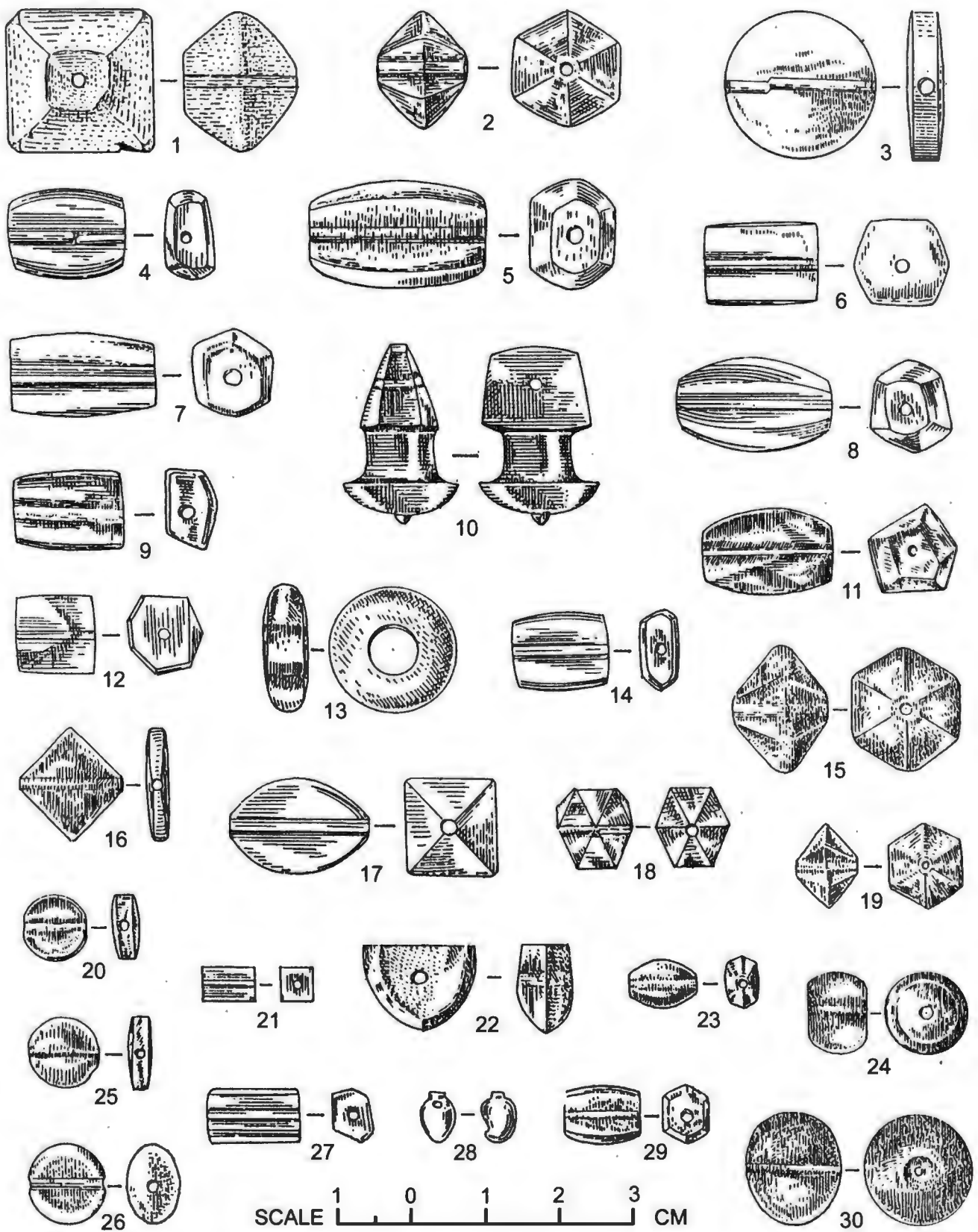


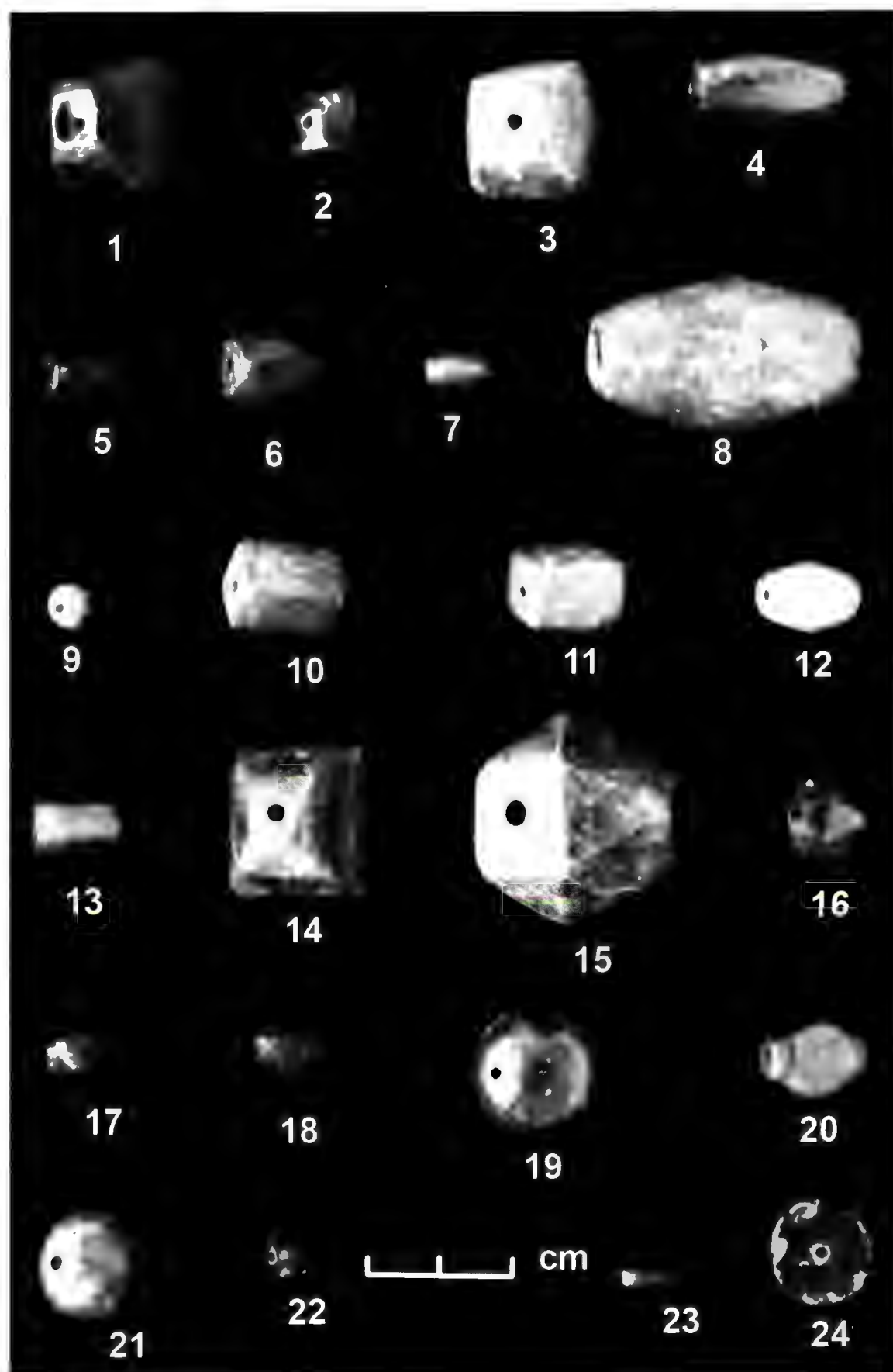
Fig. 10.7 : Crystal beads

16. Flat, bicone, well finished, period V, Reg. No. 12310.
17. Square, barrel, period V, Reg. No. 5103.
18. Multifaceted, period V, Reg. No. 4183.
19. Hexagonal, bicone, well finished, period V, Reg. No. 13.
20. Tabular, period V, Reg. No. 627.
21. Square, cylindrical, period V, Reg. No. 11140.
22. Flat, inverted half moon, well finished, period V, Reg. No. 4906.
23. Hexagonal, barrel, period V, Reg. No. 983.
24. Short, barrel, well finished, period III, Reg. No. 7248.
25. Tabular, period V, Reg. No. 7528.
26. Disc, biconvex, period V, Reg. No. 10560.
27. Hexagonal, cylindrical, a cherty vein alongside, period V, Reg. No. 6311.
28. Mango shaped amulet, well finished, jade, period V, Reg. No. 10600.
29. Barrel, faceted, hexagonal, well finished, period V, Reg. No. 10024.
30. Spherical, well finished, period III, Reg. No. 7337.
2. Black Jasper, square barrel, well finished, period V, Reg. No. 3041.
3. Black Jasper, square barrel, well finished, period V, Reg. No. 8668.
4. Green Jasper, triangular barrel, well finished, period V, Reg. No. 9311.
5. Black Jasper, triangular barrel, well finished, period V, Reg. No. 11794.
6. Black Jasper, triangular barrel, well finished, period V, Reg. No. 7860.
7. Red Jasper, triangular barrel, well finished, period V, Reg. No. 10450.
8. Green Jasper, barrel, above normal size hole, period V, Reg. No. 4106.
9. Red Jasper, circular, well finished, period III, Reg. No. 9203.
10. Red Jasper, square cylindrical, well finished, period V, Reg. No. 9571.
11. Red Jasper, square cylindrical, period V, Reg. No. 4134.
12. Green Jasper, bicone, well finished, period V, Reg. No. 10744.
13. Green Jasper, square cylindrical, well finished, period V, Reg. No. 11900.
14. Green Jasper, square short barrel, period V, Reg. No. 4910.
15. Red Jasper, multifaceted, well finished, period V, Reg. No. 10909.
16. Green Jasper, multifaceted, well finished, period V, Reg. No. 12471.
17. Green Jasper, multifaceted, well finished, period V, Reg. No. 12400.

H. JASPER BEADS

(Pl. 10.7; Fig. 10.7)

1. Black Jasper, square barrel, well polished, period V, Reg. No. 132256.
18. Green Jasper, multifaceted, well finished, period V, Reg. No. 5878.



Pl. 10.8 : Jasper beads

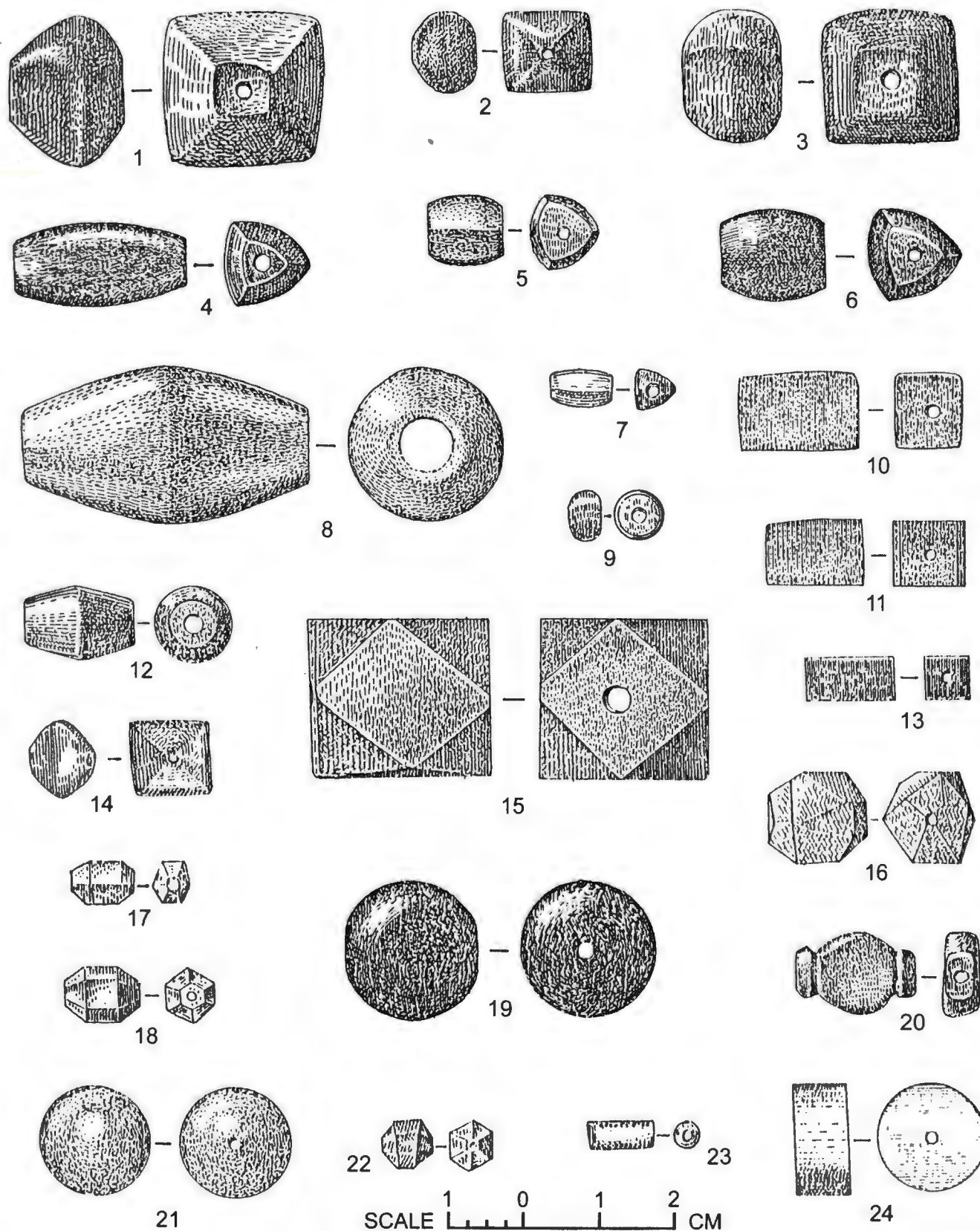
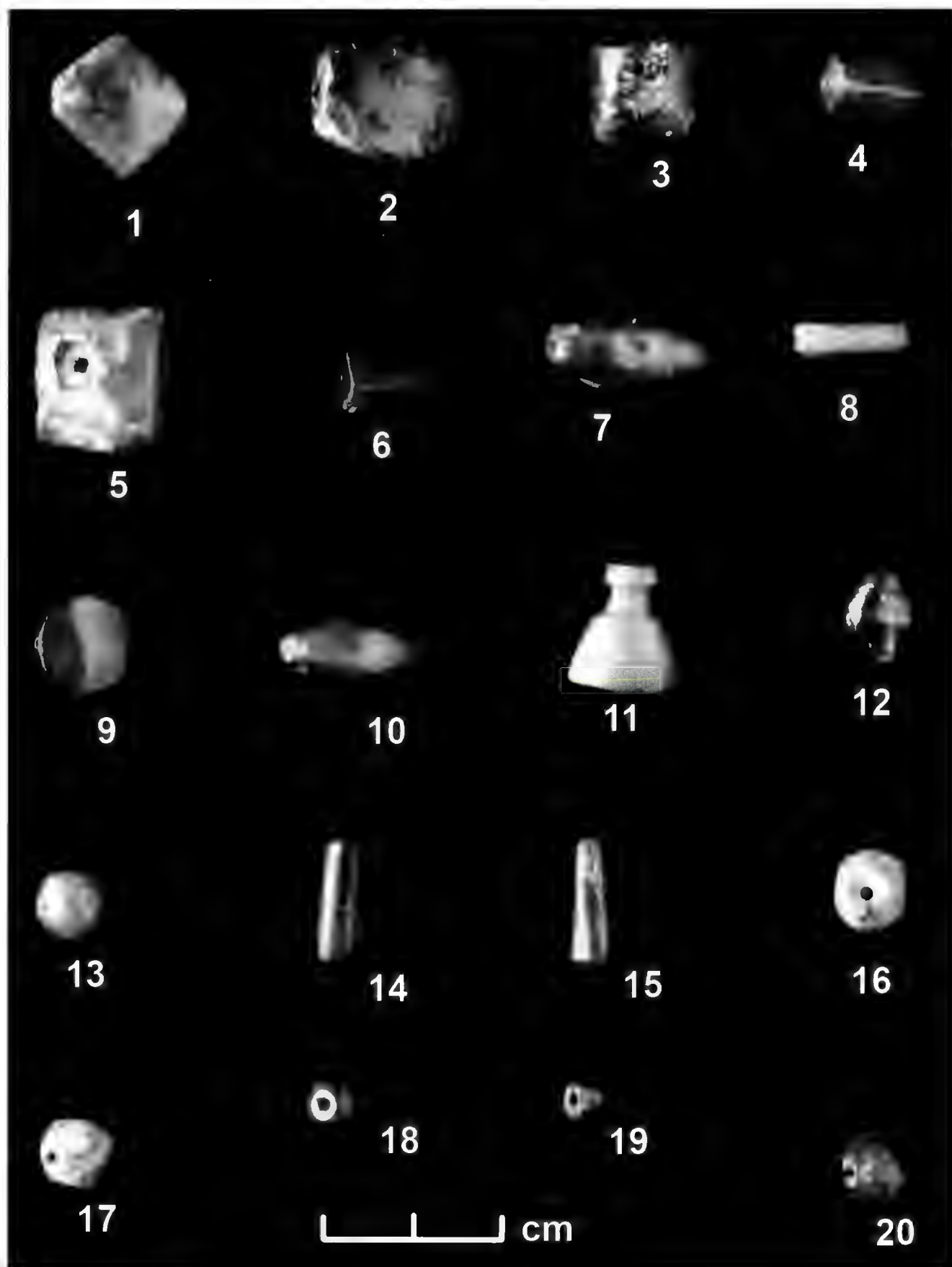


Fig. 10.8 : Jasper beads



Pl. 10.9 : Carnelian beads

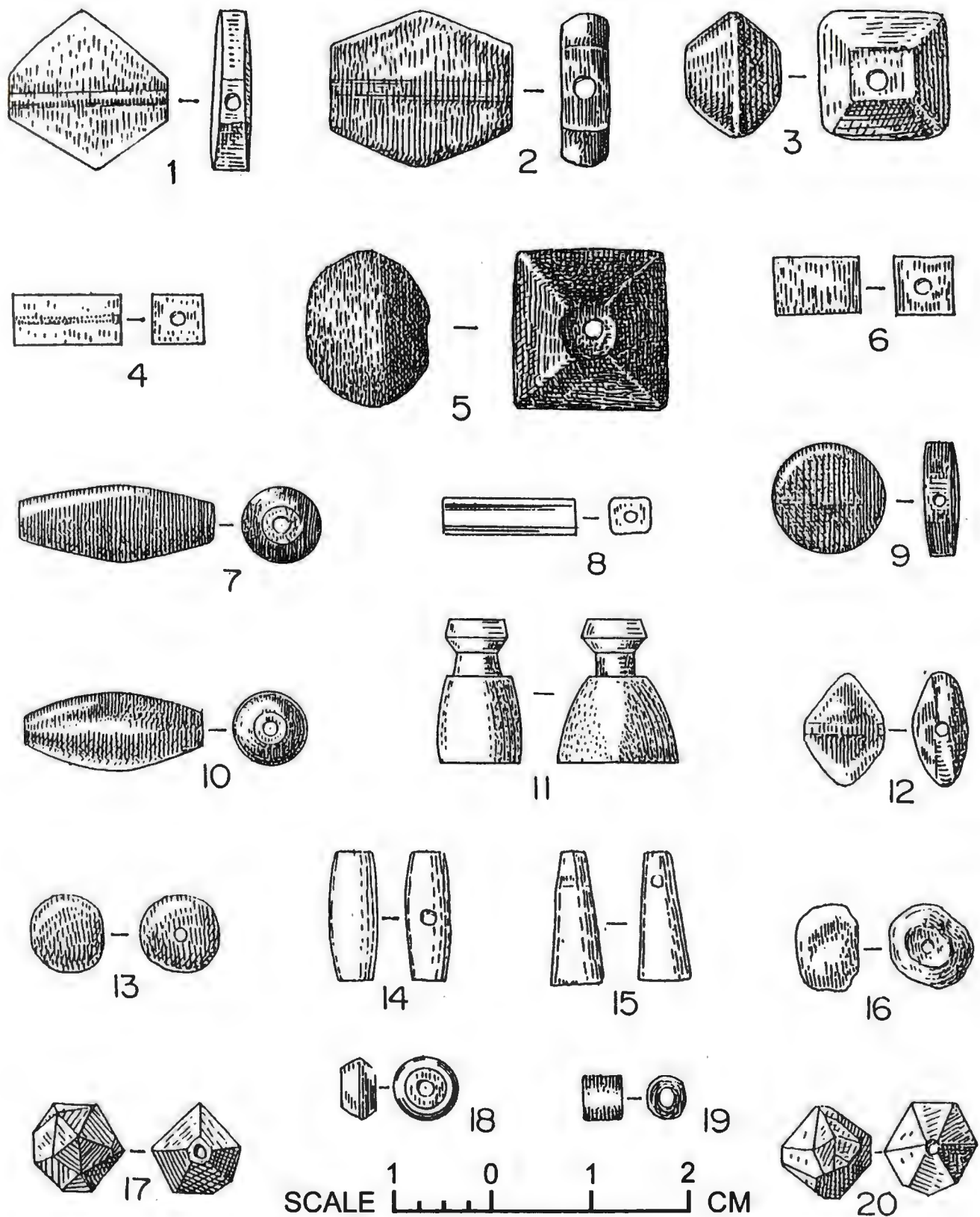


Fig. 10.9 : Carnelian beads

19. Black Jasper, spherical, well finished, period V, Reg. No. 6851.

20. Black Jasper, bicollared tabular, well finished, period V, Reg. No. 12749.

21. Black Jasper, spherical well finished, period V, Reg. No. 5946.

22. Green Jasper, multifaceted, well finished, period III, Reg. No. 12600.

23. Green Jasper, cylindrical, period V, Reg. No. 888.

24. Black Jasper, short cylindrical, well finished, period V, Reg. No. 8935.

I. CARNELIAN BEADS

The illustration includes a couple of pendants one of which is without a hole (Reg. No. 7509).

(Pl. 10.8; Fig. 10.8)

1. Flat bicone truncated, well finished, period V, Reg. No. 8434.

2. Flat bicone truncated, moderately finished, period V, Reg. No. 8936.

3. Square bicone truncated, well finished, period V, Reg. No. 2404.

4. Square cylindrical, well finished, period V, Reg. No. 11901.

5. Square barrel truncated, well finished, period V, Reg. No. 6703.

6. Square cylindrical, well finished, period V, Reg. No. 12444.

7. Barrel, well finished, period V, Reg. No. 9578.

8. Square cylindrical, period V, Reg. No. 5270.

9. Tabular, well finished, period V, Reg. No. 564.

10. Barrel, well finished, period V, Reg. No. 7007.

11. *Stupi* type pendant without hole, it might have been worn with a string knot tied to the neck, well finished, period V, Reg. No. 7509.

12. Bicone with a convex section, period V, Reg. No. 4284.

13. Spherical, period III, Reg. No. 7772.

14. Barrel with a transverse hole across the centre, well finished, period V, Reg. No. 10617.

15. Cylindrical pendant with a transverse hole across on the tapering top, well finished, period V, Reg. No. 2331.

16. Spherical, moderately polished, period V, Reg. No. 7764.

17. Multifaceted, well finished, period V, Reg. No. 587.

18. Bicone truncated, well finished, period V, Reg. No. 12255.

19. Short cylindrical, period III, Reg. No. 6931.

20. Multifaceted, well finished, period V, Reg. No. 9926.

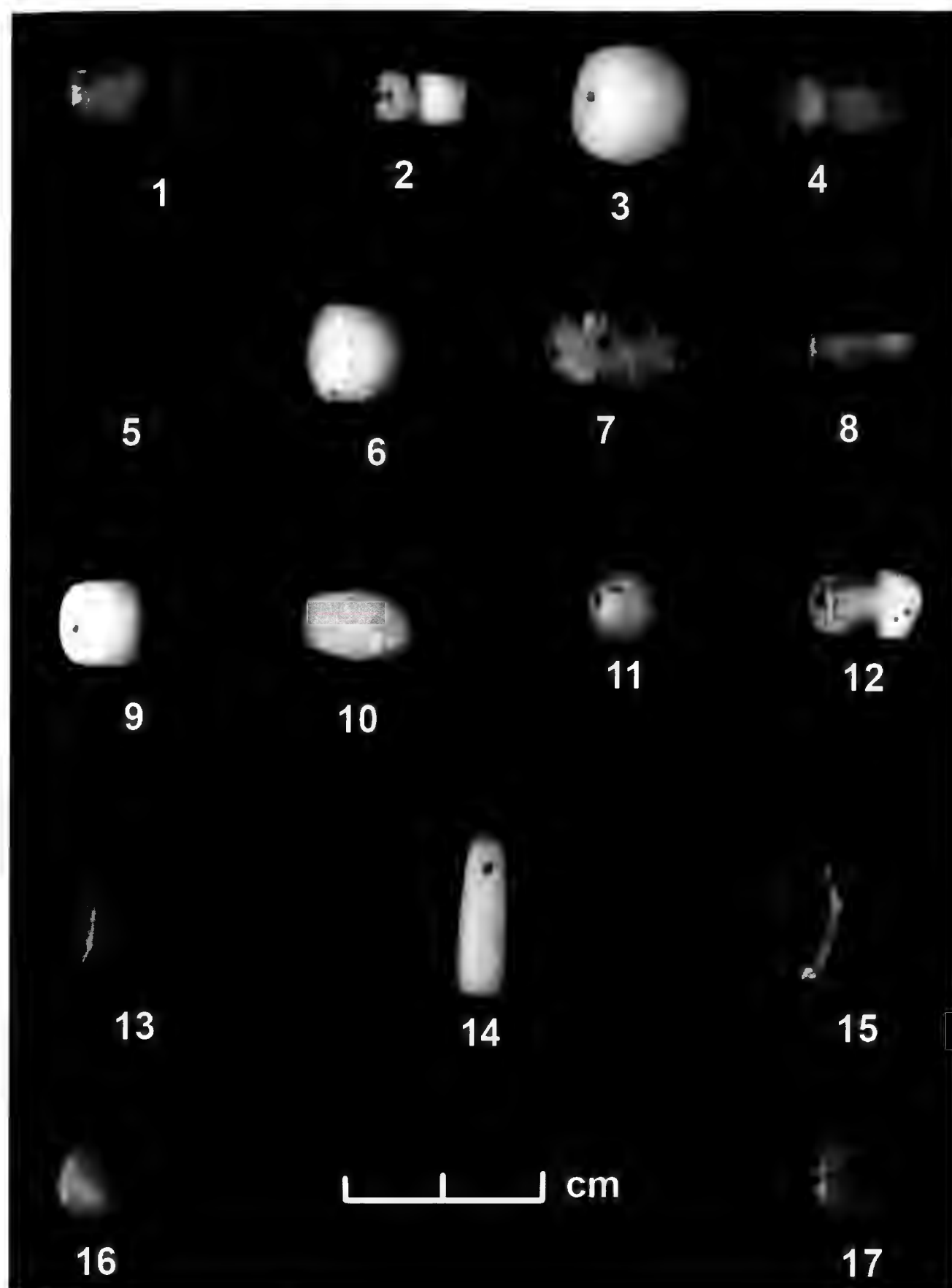
J. CHALCEDONY BEADS

Out of seventeen beads illustrated here, four have overlapping perforations of irregular nature which are examples of imperfect drilling.

(Pl. 10.9; Fig. 10.9)

1. Triangular barrel bead, well finished, period V, Reg. No. 989.

2. Cylindrical bead, elliptical section, period V, Reg. No. 1708.



Pl. 10.10 : Chalcedony beads

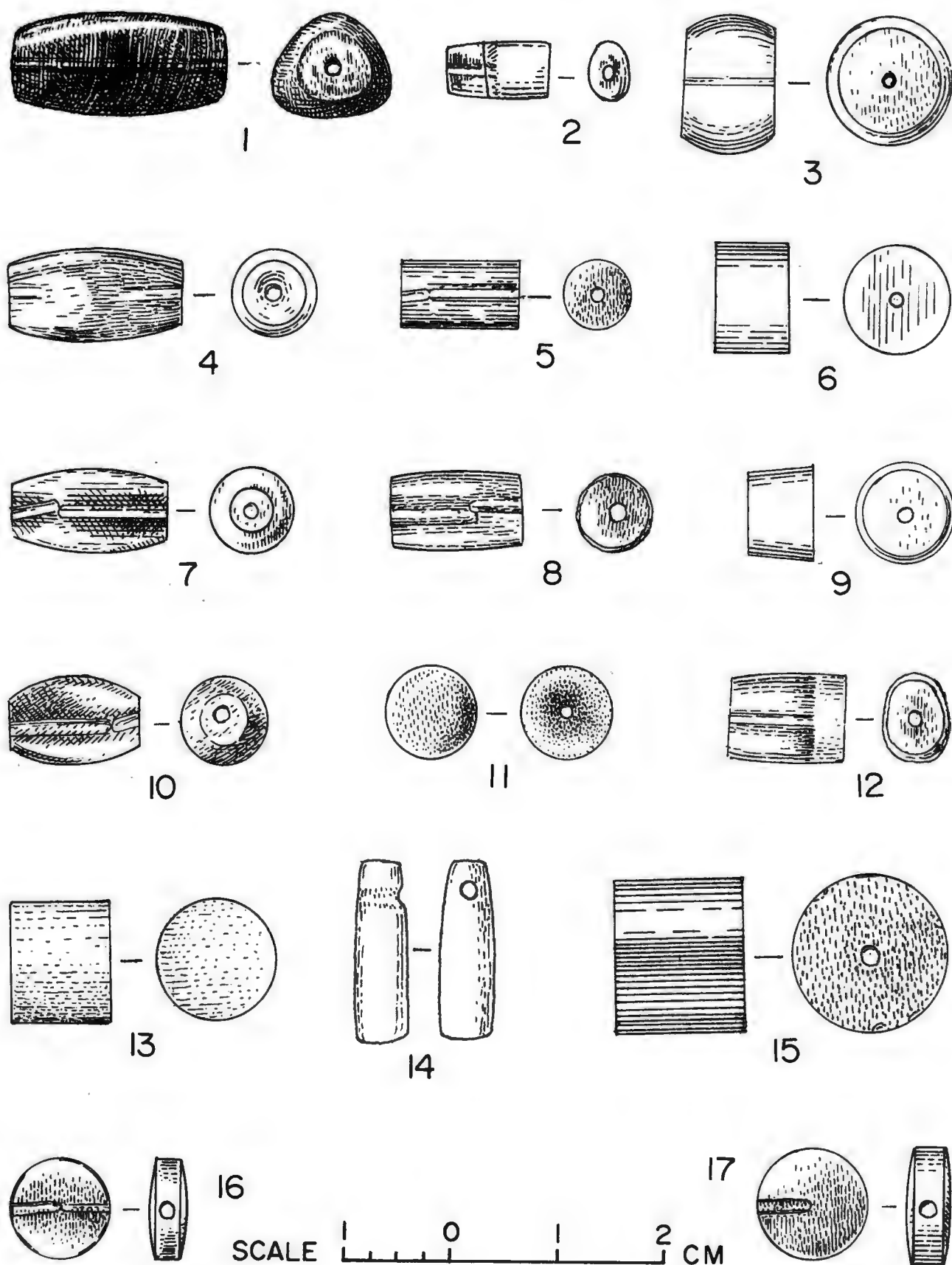
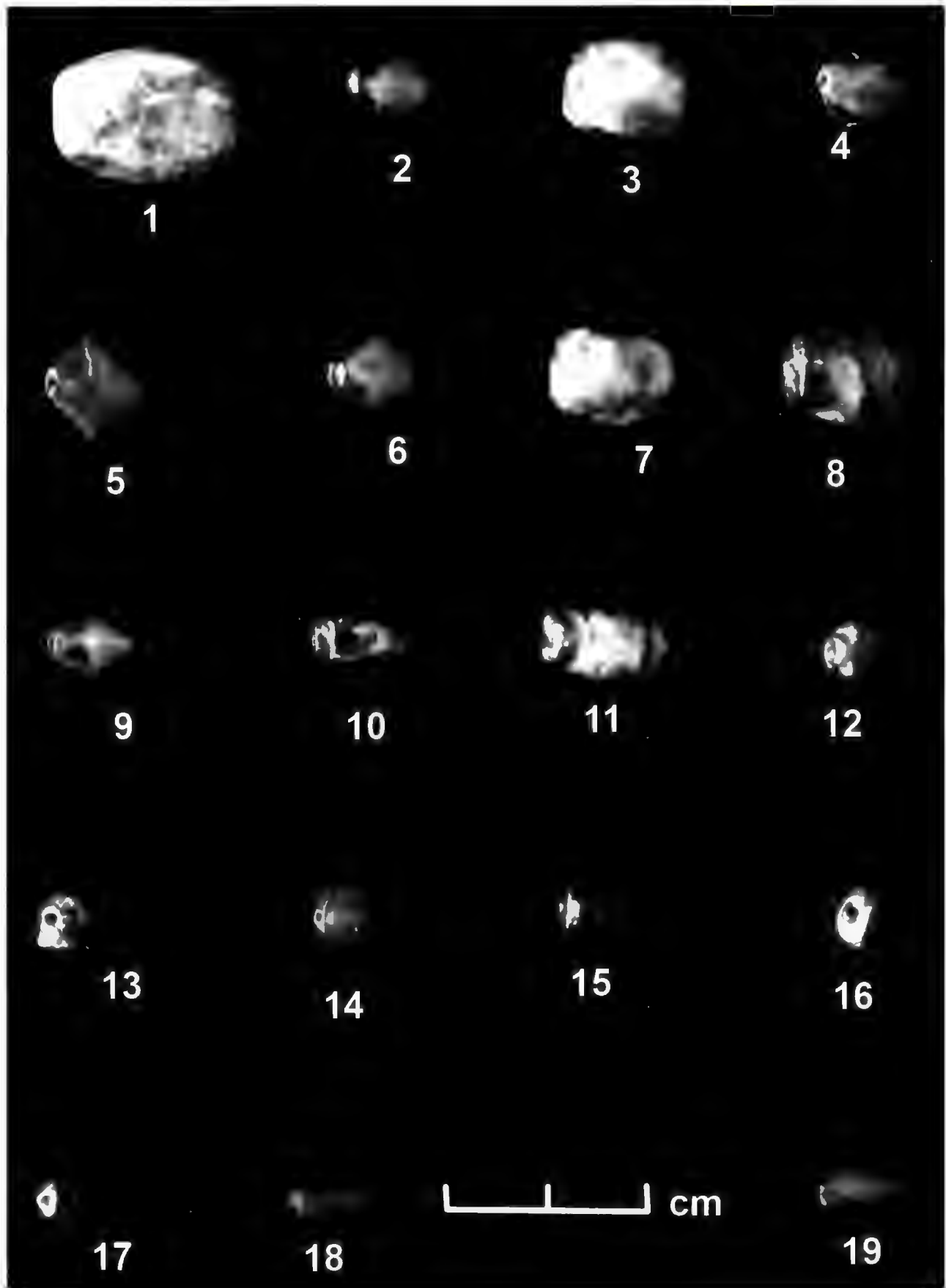


Fig. 10.10 : Chalcedony beads

3. Short barrel bead, well finished, period V, Reg. No. 11392.
4. Barrel bead, well finished, period V, Reg. No. 5176.
5. Cylindrical bead, imperfect drilling, period V, Reg. No. 4141.
6. Short cylindrical bead, period V, Reg. No. 4902.
7. Barrel bead, imperfect drilling, period V, Reg. No. 12162.
8. Barrel bead, imperfect drilling, period V, Reg. No. 1808.
9. Cylindrical bead with a tapering end, period V, Reg. No. 2788.
10. Barrel bead, imperfect drilling, period V, Reg. No. 4737.
11. Spherical bead, well finished, period V, Reg. No. 5016.
12. Barrel bead, elliptical section, period V, Reg. No. 2872.
13. Cylindrical, finished, period V, Reg. No. 9674.
14. Pendulous, cylindrical with transverse hole on top, period V, Reg. No. 12174.
15. Cylindrical, bead, well finished, period V, Reg. No. 8400.
16. Tabular bead, well finished, period V, Reg. No. 2649.
17. Tabular bead, well finished, period V, Reg. No. 9219.
1. Violet, barrel faceted, well finished, period V, Reg. No. 12677.
2. Violet, flat bicone truncated, well finished, period IV, Reg. No. 8558.
3. Purple, cylinder faceted, well finished, period V, Reg. No. 2939.
4. Purple, flat barrel, well finished, period IV, Reg. No. 13213.
5. Violet, flat bicone truncated, period V, Reg. No. 3241.
6. Purple, flat bicone truncated, well finished, period V, Reg. No. 13190.
7. Purple, cylindrical faceted, period V, Reg. No. 11753.
8. Purple, barrel with elliptical section, well finished, period V, Reg. No. 950.
9. Violet, flat bicone truncated, period V, Reg. No. 11064.
10. Purple, barrel collared, well finished, period V, Reg. No. 15466.
11. Purple, barrel collared, period V, Reg. No. 8771.
12. Violet, tabular collared, period V, Reg. No. 935.
13. Violet, multifaceted, well finished, period V, Reg. No. 5877.
14. Violet, tabular, well finished, period V, Reg. No. 12528.
15. Garnet bead (?), square cylindrical, well finished, period V, Reg. No. 12108.
16. Violet, irregular shape, period V, Reg. No. 10235.
17. Violet, spherical, period V.

K. AMETHYST BEADS

(Pl. 10.11; Fig. 10.11)



Pl. 10.11 : Amethyst beads

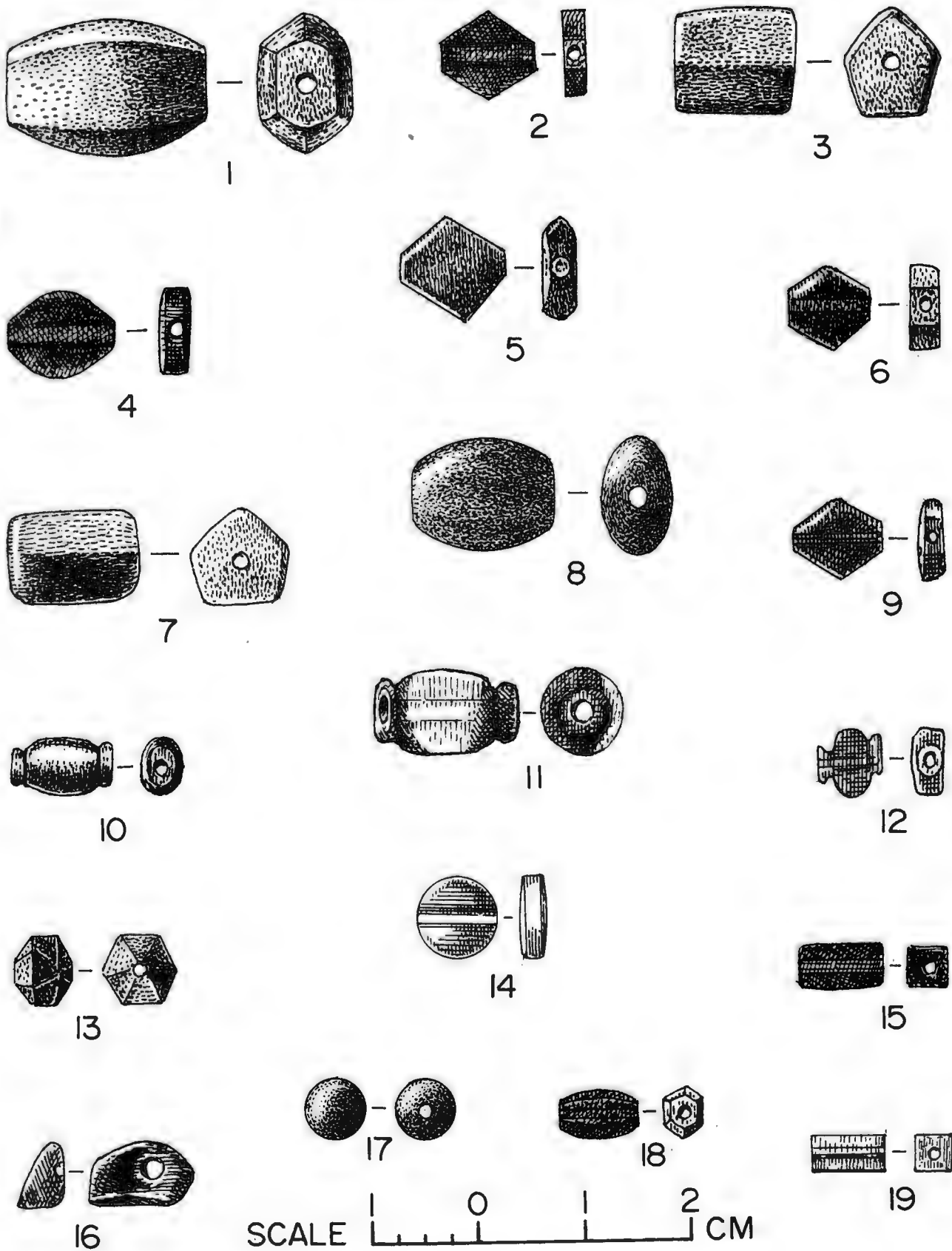


Fig. 10.11 : Amethyst beads

18. Violet, barrel facettled, well finished, period V, Reg. No. 8966.

19. Violet, square cylindrical, well finished, period V, Reg. No. 7527.

L. FAIENCE BEADS

The tradition of faience bead making dates back to the Harappan times. There are two types of faiences, one mainly composed of a ceramic with siliceous body and the other of steatite paste. The technology of faience bead making goes in to oblivion for some time and reoccurs around early Historical period. Some of the shapes illustrated here have also been reported from Ahichchhatra¹.

(Pl. 10.12; Fig. 10.12)

1. Star shaped, thick, well finished, period V, Reg. No. 8563.

2. Flat bicone collared, period V, Reg. No. 877.

3. Star shaped, thick, well finished, period V, Reg. No. 12830.

4. Flat bicone collared, period V, Reg. No. 11808.

5. Flat tabular with two collared end, period V, Reg. No. 12870.

6. Flat barrel collared, period V, Reg. No. 10192.

7. Spherical with longitudinal grooves, period V, Reg. No. 4197.

8. Flat tabular with a three collared end, period V, Reg. No. 12885.

9. Spherical with pimpled surface, period V, Reg. No. 6177.

10. Spherical with pimpled surface, period V, Reg. No. 12727.

1. Moreshwar G. Dikshit, *Beads From Ahichchhatra*, U.P. *AI*, 8, 1952, pp. 51-52, fig. 4, pl. XIII-A.

11. Irregular spherical with pimpled surface, period V, Reg. No. 3550.

12. Spherical with longitudinal grooves, period V, Reg. No. 3425.

13. Barrel collared, period V, Reg. No. 3706.

14. Barrel collared, period V, Reg. No. 1376.

15. *Amalaka* shaped with double collars on both sides, period V, Reg. No. 12221.

16. *Amalaka* shaped with double collars on both sides, period V, Reg. No. 10578.

17. Barrel bead, period V, Reg. No. 1014.

M. STEATITE BEADS

The steatite beads have been found widely distributed in India, beginning in the pre-formative horizons of the early Harappans at Mehrgarh². A couple of methodologies followed in the making are by flaking soft stone and moulding steatite paste into a bead. The paste beads are generally sun baked and at times fired, resulting into white colour. Hegde and his team have given an account on the composition and technology³.

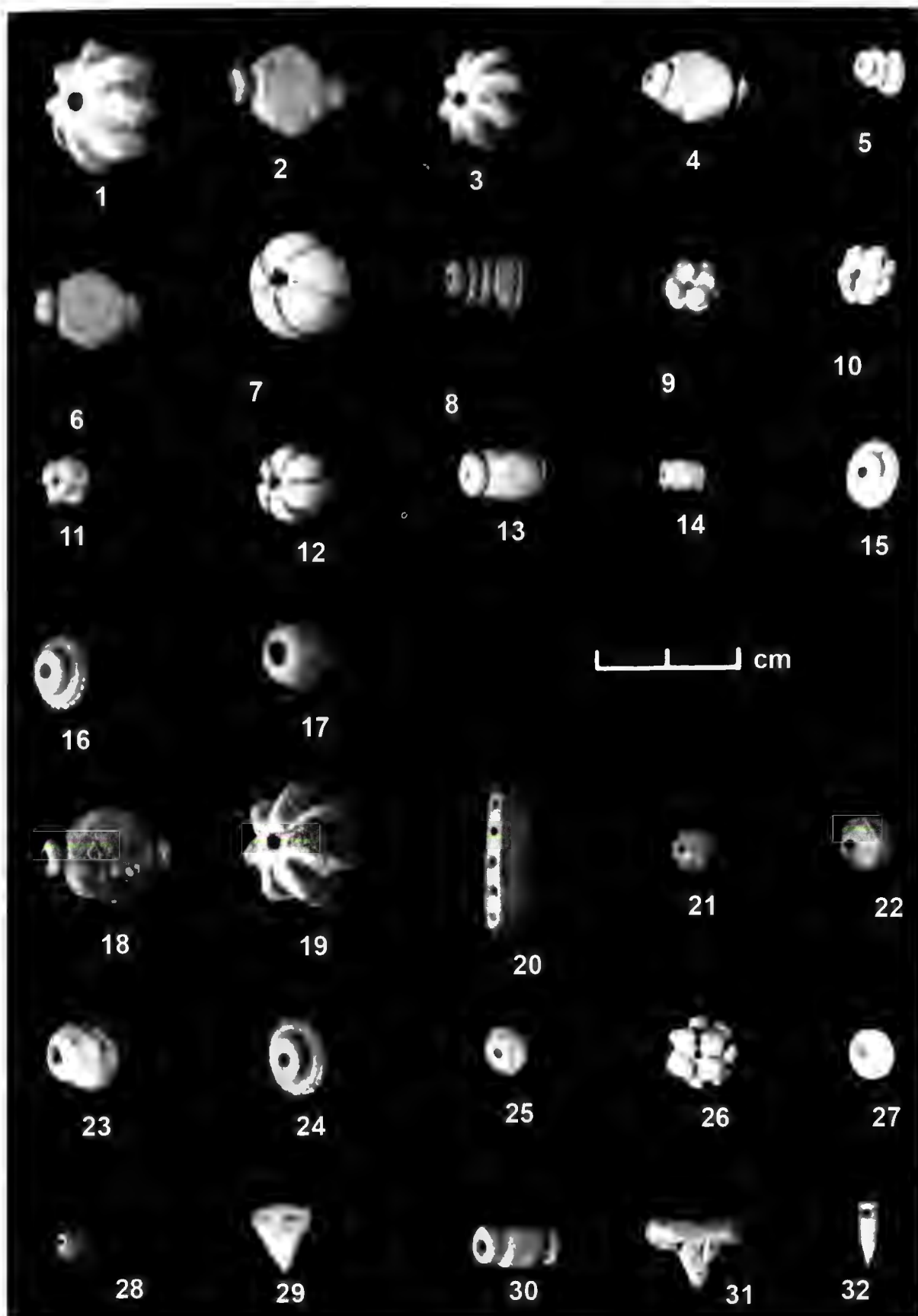
The middle Ganga plain have reported steatite beads at sites like Chirand⁴, Lahuradeva⁵ etc. from early farming phase. However, in the early Historical

2. M. Vidale, *Early Bead Makers of the Indus Tradition: the Manufacturing Sequence of Talc Beads at Mehrgarh in the 5th Millennium BC*, *EW* 45 (1-4), 1995, pp. 45-80.

3. K.T.M. Hegde, *et al.* *On the Composition and Technology of Harappan Microbeads*, *Harappan Civilisation: A Recent Perspective*, ed. G.L. Possehl, New Delhi, 1993, pp. 239-243.

4. B.P. Sinha, *Harappan Fallout (?) in the Mid-Gangetic Valley*, *Harappan Civilisation: A Recent Perspective*, ed. G.L. Possehl, New Delhi, 1993, p. 138.

5. Rakesh Tewari *et al.* *Early Farming at Lahuradeva*, *Pragdhara* 18, p. 350.



Pl. 10.12 : Faience beads (sl. no. 1-17), Steatite beads (sl. no. 18-20, 23-27, 29-32), Corundum beads (sl. no. 21, 22 & 28)

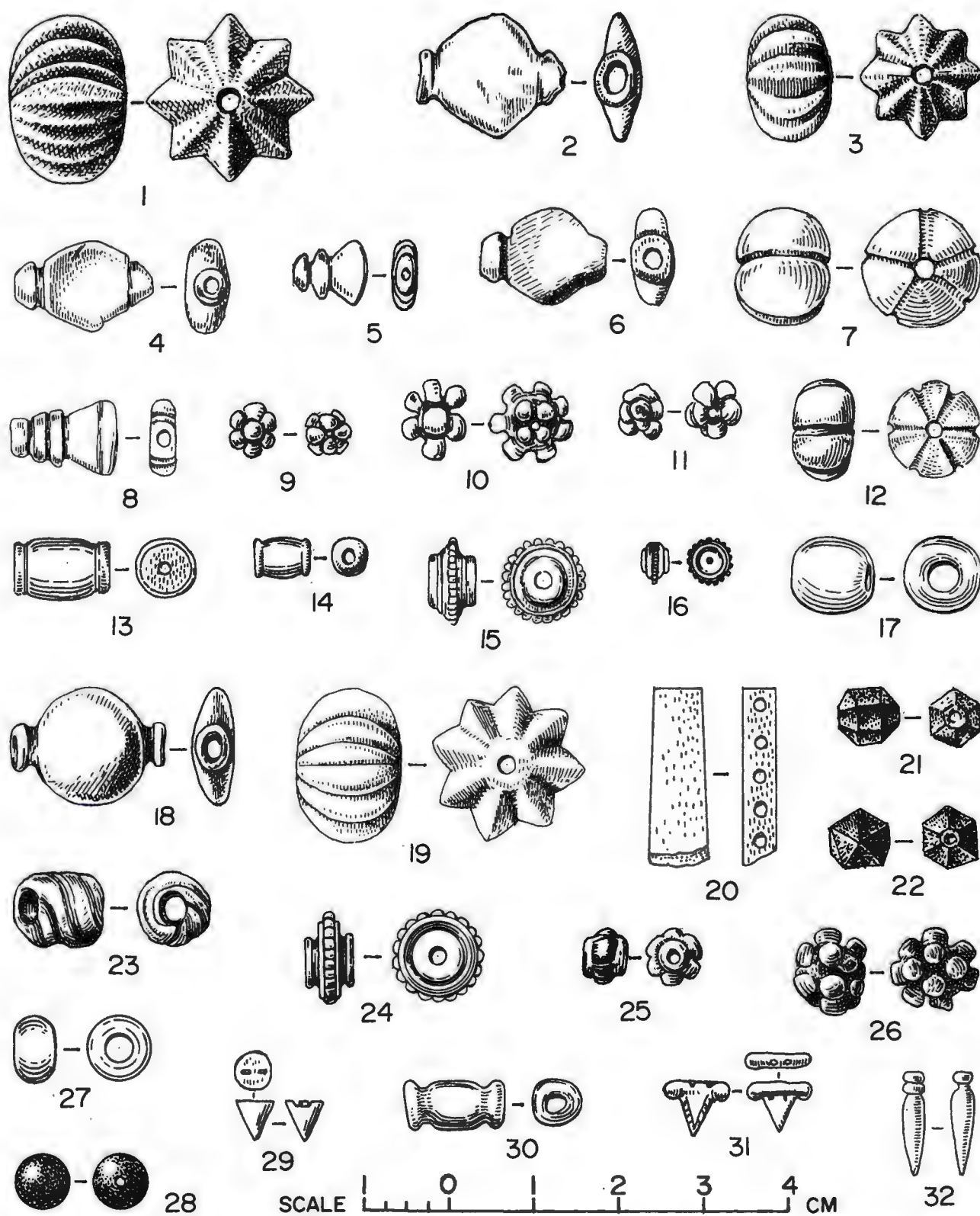


Fig. 10.12 : Faience beads (sl. no. 1-17), Steatite beads (sl. no. 18-20, 23-27, 29-32), Corundum beads (sl. no. 21, 22 & 28)

context, Pauni has reported a sizable number of such beads.¹

Out of fifteen specimens (Sr. No. 18-32) described below, Sr. No. 21, 22 and 28 are of corundum and inadvertently it has been grouped with the beads of steatite. Corundum is extremely hard crystallized semi-precious stone, fall in the category of gemstone.

(Pl. 10.12; Fig. 10.12)

18. Flat barrel collared, period V, Reg. No. 6806.

19. Star shaped, thick, period V, Reg. No. 7708.

20. Spacer bead, bar shaped with five transverse holes, burnt, slightly damaged end, Period V, Reg. No. 12617.

21. Corundum multifaceted, well finished, period V, Reg. No. 2092.

22. Corundum multifaceted, well finished, period V.

23. Cylindrical with spiral surface, period V, Reg. No. 740.

24. *Amalaka* with double collars on both ends, well finished, period V, Reg. No. 740.

25. Barrel with longitudinally grooved surface, period V.

26. Spherical with pimpled surface all over, period V, Reg. No. 728.

27. Short barrel, period V, Reg. No. 1202.

28. Corundum spherical, well finished, period V, Reg. No. 1777.

29. Spacer bead² of top shape with hole drilled into the flat surface, period V, Reg. No. 10501.

1. Amarendra Nath, *op. cit.*, p. 71.

30. Cylindrical collared, period V, Reg. No. 790.

31. Spacer bead with a bar top and triangular base, well finished, period V, Reg. No. 9254.

32. Pendulous, thin pointed tip, period V, Reg. No. 7392.

N. MISCELLANEOUS BEADS

While classifying beads of various categories, some of the important beads and pendants could not be incorporated in specific categories, however, these are described below:

(Pl. 10.13; Fig. 10.13)

1. Spacer bead: Rectangular shape with three transversely drilled holes, stone, period V, Reg. No. 11864.

2. Amulet: Tortoise shaped, lapis lazuli, period V, Reg. No. 5285.

3. Bead: Spherical uneven surface, stone, period V, Reg. No. 1868.

4. Spacer bead: Hexagonal shaped, seven holes, lapis lazuli, period V, Reg. No. 4332.

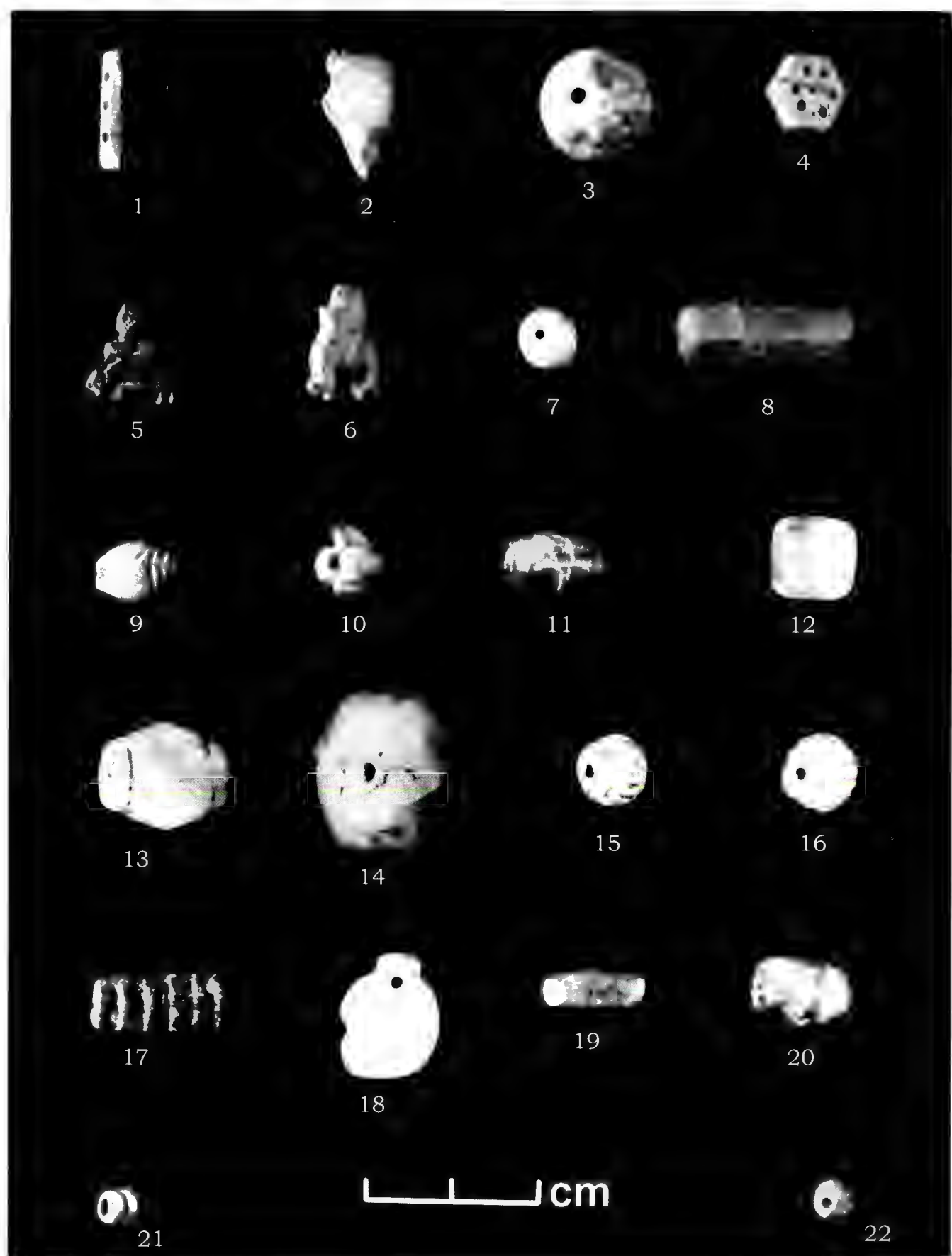
5. Pendant: Decorated with *uttanapada* motif, lapis lazuli, period V, Reg. No. 9670.

6. Pendant: *Triratna* shaped, stone, period V, Reg. No. 10440.

7. Bead: Spherical with transverse hole, stone, period V, Reg. No. 8934.

8. Bead: Rectangular shaped with square section, lapis lazuli, period V, Reg. No. 9606.

2. This bead bears similarity with the one reported at Prakash, B.K. Thapar, Prakash 1955: A Chalcolithic site in the Tapti Valley, *AI*, 20 & 21, 1967, p. 114-115, fig. 38-32, pl. XXII-32.



Pl. 10.13 : Miscellaneous beads

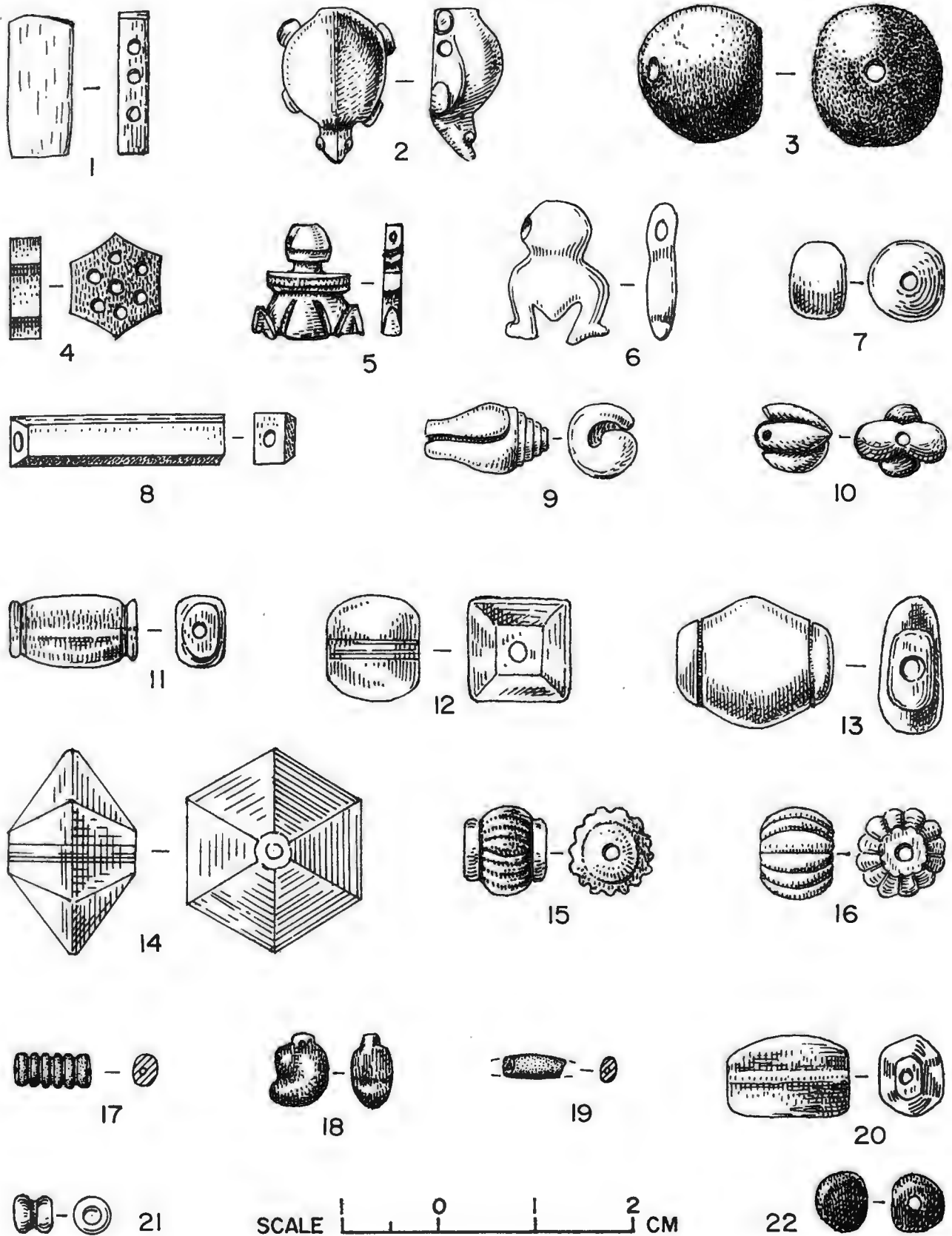


Fig. 10.13 : Miscellaneous beads

9. Bead: Counc shaped, vertically drilled hole, lapis lazuli, period V, Reg. No. 11346.
10. Bead: Petal shaped, stone, period V, Reg. No. 6148.
11. Bead: Biconvex collared glass light greenish colour, period V, Reg. No. 13164.
12. Bead: Circular faced with squarish bottom, quartz, period V, Reg. No. 11732.
13. Bead: Truncated bicone collared, milky quartz, period V, Reg. No. 7466.
14. Bead: Hexagonal, bicone multi-faceted quartz, period V, Reg. No. 6226.
15. Bead: Collared *amalaka* shape, milky quartz, period V, Reg. No. 3507.
16. Bead: Bicone *amalaka* shape, milky quartz, period V, Reg. No. 10234.
17. Bead: Segmented, bone, period V, Reg. No. 4657.
18. Amulet: Mango shaped, jade, period V, Reg. No. 10600.
19. Bead: Biconvex truncated, slightly damaged, ivory, period V, Reg. No. 5831.
20. Bead: Multi-faceted, rectangular section, quartz, period V, Reg. No. 12391.
21. Bead: Circular, segmented paste, period V, Reg. No. 125.
22. Bead: Roughly spherical small size, lapis lazuli, period V, Reg. No. 4596.

O. UNFINISHED BEADS AND PENDANTS

As noted earlier, the site has reported a sizeable number of unfinished beads of several stages of manufacture of various raw materials like chalcedony, carnelian, jasper, agate, quartz, chert, amethyst, crystal besides terracotta and glass. The data available from the site indicate community involvement in the

procurement of selective raw material from the source, followed by initial processing by heating, flaking and making bead blanks for obtaining desirable shape, subsequently initiating grinding, polishing, and drilling for achieving the final product.

A full fledged lapidary industry which functioned at the site has been corroborated on the basis recovery of tools and plants besides required raw material available in the neighbourhood of the site. Its strategic location on the hinterland trade route connecting native and overseas marts and ports, under certain organized marketing system had led to a flourishing economy.

The stages of unfinished beads are classified into four categories depending on the stages of manufacture. These are:

- Stage I: Core removed out of raw material, showing rough out surface and primary chipping
- Stage II: Fully dressed but not grounded and polished
- Stage III: Fully grounded and polished without drilling
- Stage IV: Partly processed drilling or damaged while drilling

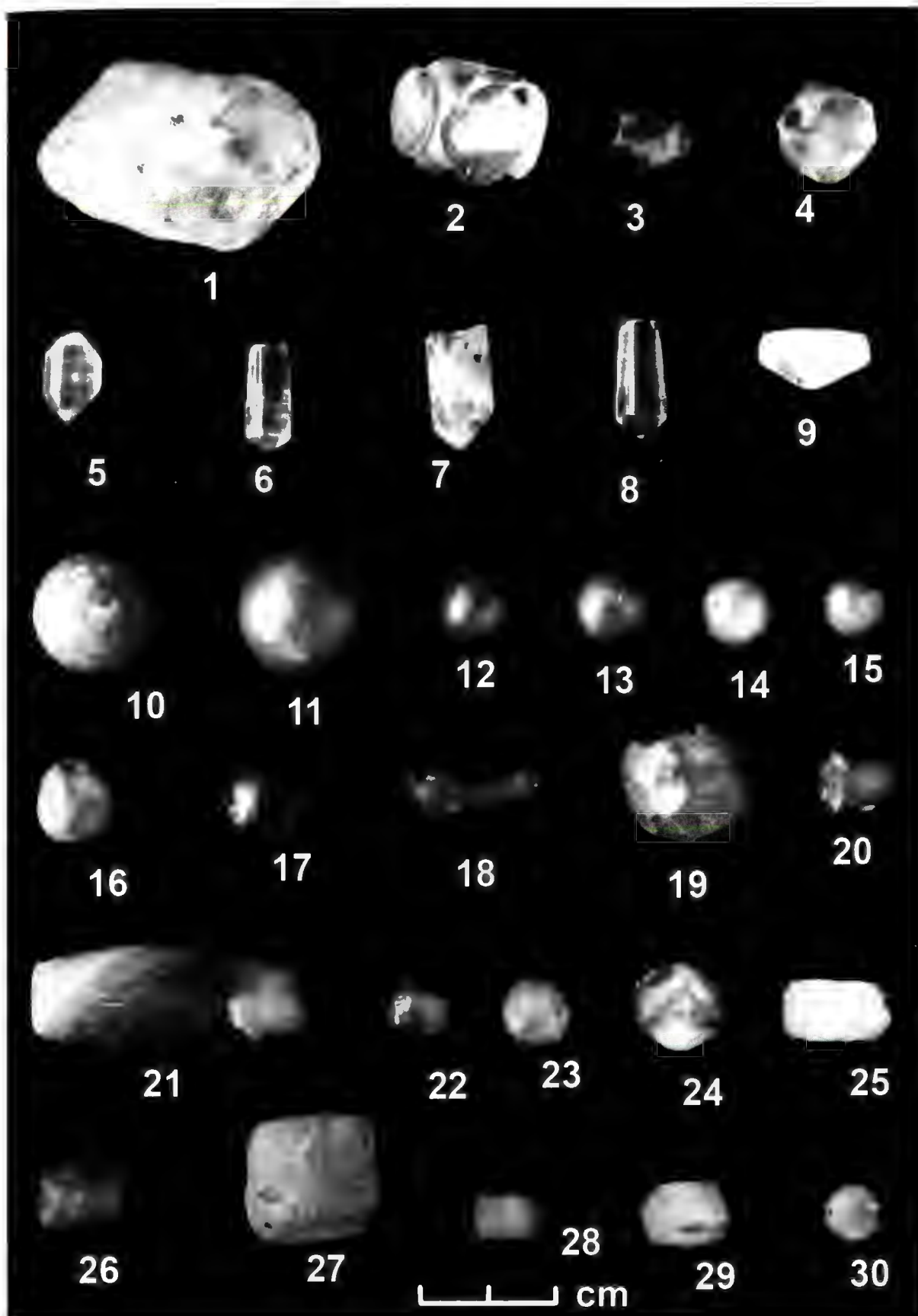
Recently, a significant survey of bead manufacturing at Mahurjhari located in the Wardha-Wainganga valley has been carried out¹. The location of the site amply falls in the exchange network of fortified settlements at Adam and Pauni which provided market to the finished products of such sites located in the Wardha-Wainganga valley.

Exemplified are some of the specimens showing different stages in the manufacture of beads, material-wise:

(i) UNFINISHED QUARTZ AND CRYSTAL BEADS

(Pl. 10.14; Fig. 10.14)

1. R.K. Mohanty, Significance of Bead Manufacturing Centre at Mahurjhari, District Nagpur; Maharashtra, India, *ME*, XXVI (2), 1999, pp. 79-89.



Pl. 10.14 : Unfinished beads and Pendants; Quartz and Crystal (sl. no. 1-9), Jasper (sl. no. 10-20), Chalcedony (sl. no. 21-30)

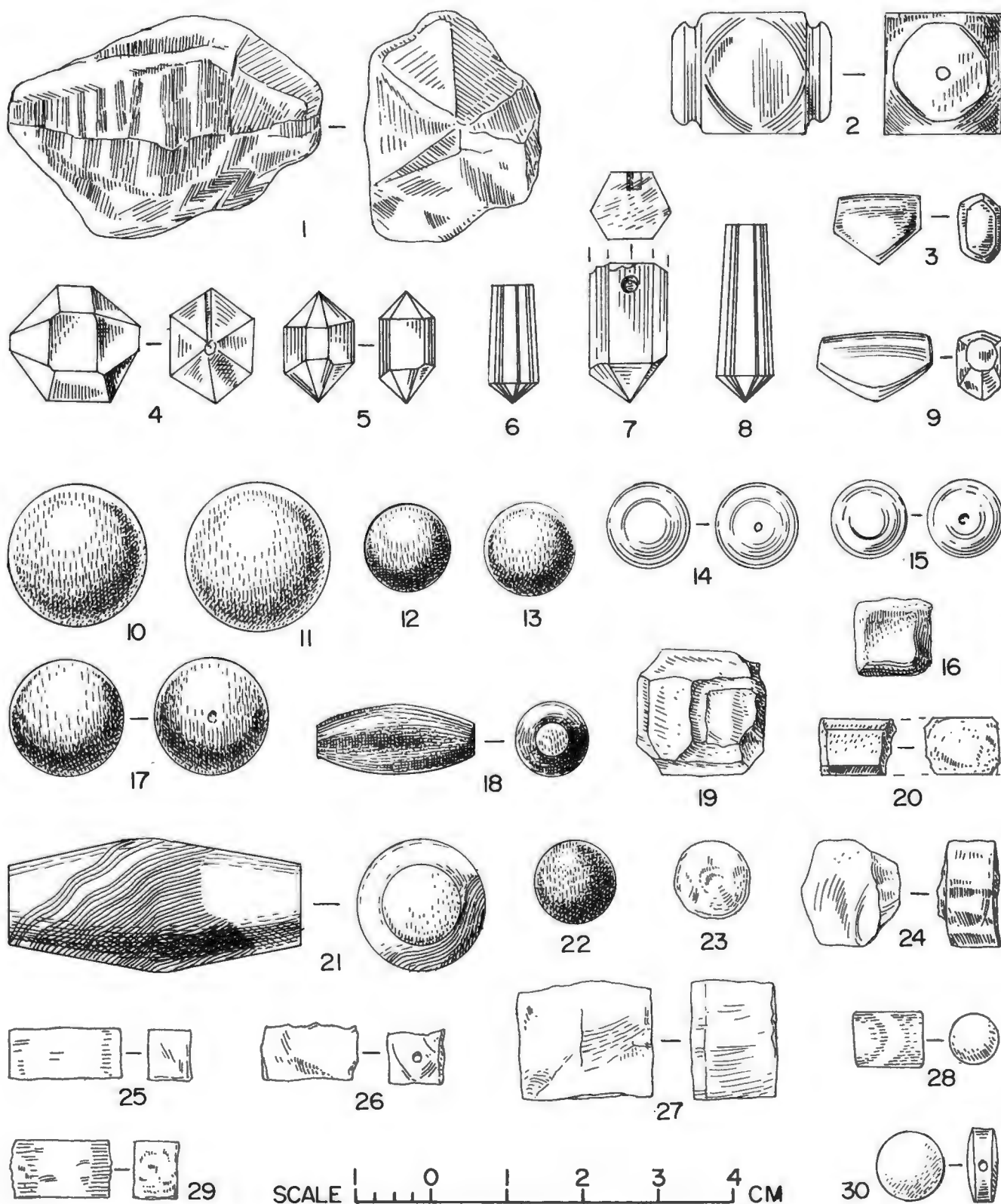


Fig. 10.14 : Unfinished beads and Pendants; Quartz and Crystal (sl. no. 1-9), Jasper (sl. no. 10-20), Chalcedony (sl. no. 21-30)

1. Attempted bead of unspecified shape, stage I, period V, Reg. No. 8359.
2. Attempted bead of cubical shape with collars, stage IV, period V, Reg. No. 11940.
3. Attempted flat facettèd pendulous bead, stage III, period V, Reg. No. 6697.
4. Attempted hexagonal facettèd bead, stage III, period V, Reg. No. 6161.
5. Attempted hexagonal facettèd bead, stage III, period V, Reg. No. 9362.
6. Attempted cylindrical pendulous bead with pointed tip, stage III, period V, Reg. No. 8998.
7. Attempted hexagonal pendulous bead, stage IV, period V, Reg. No. 8694.
8. Attempted cylindrical pendulous bead with a pointed tip, stage III, period V, Reg. No. 13434.
9. Attempted hexagonal flat bicone truncated bead, stage III, period V, Reg. No. 13214.

(ii) UNFINISHED JASPER BEADS

(Pl. 10.14; Fig. 10.14)

10. Attempted spherical bead, red, stage III, period V, Reg. No. 9163.
11. Attempted spherical bead, green, stage III, period V, Reg. No. 9164.
12. Attempted spherical bead, green, stage III, period V, Reg. No. 11997.
13. Attempted spherical bead, green stage III, period V, Reg. No. 7230.
14. Attempted spherical bead, green, stage IV, period V, Reg. No. 6256.
15. Attempted spherical bead, black, stage IV, period V, Reg. No. 2474.
16. Attempted cubical bead, green, stage II, period V, Reg. No. 9285.

17. Attempted spherical bead, black, stage III, period V, Reg. No. 10098.

18. Attempted barrel bead, black, stage III, period V, Reg. No. 9972.

19. Attempted cubical bead, green stage I, period V, Reg. No. 12489.

20. Attempted facettèd cylindrical bead, black, stage I, period V, Reg. No. 12415.

(iii) UNFINISHED CHALCEDONY BEADS

(Pl. 10.14; Fig. 10.14)

21. Attempted barrel bead, stage III, period V, Reg. No. 946.

22. Attempted spherical bead, stage III, Period V, Reg. No. 5890.

23. Attempted spherical bead, stage II, period V, Reg. No. 873.

24. Attempted tabular bead, stage I, period V, Reg. No. 523.

25. Attempted square cylindrical bead, stage II, period V, Reg. No. 8462.

26. Attempted square cylindrical bead, stage I, period V, Reg. No. 768.

27. Attempted cubical bead, stage II, period V.

28. Attempted cylindrical bead, stage III, period V, Reg. No. 9724.

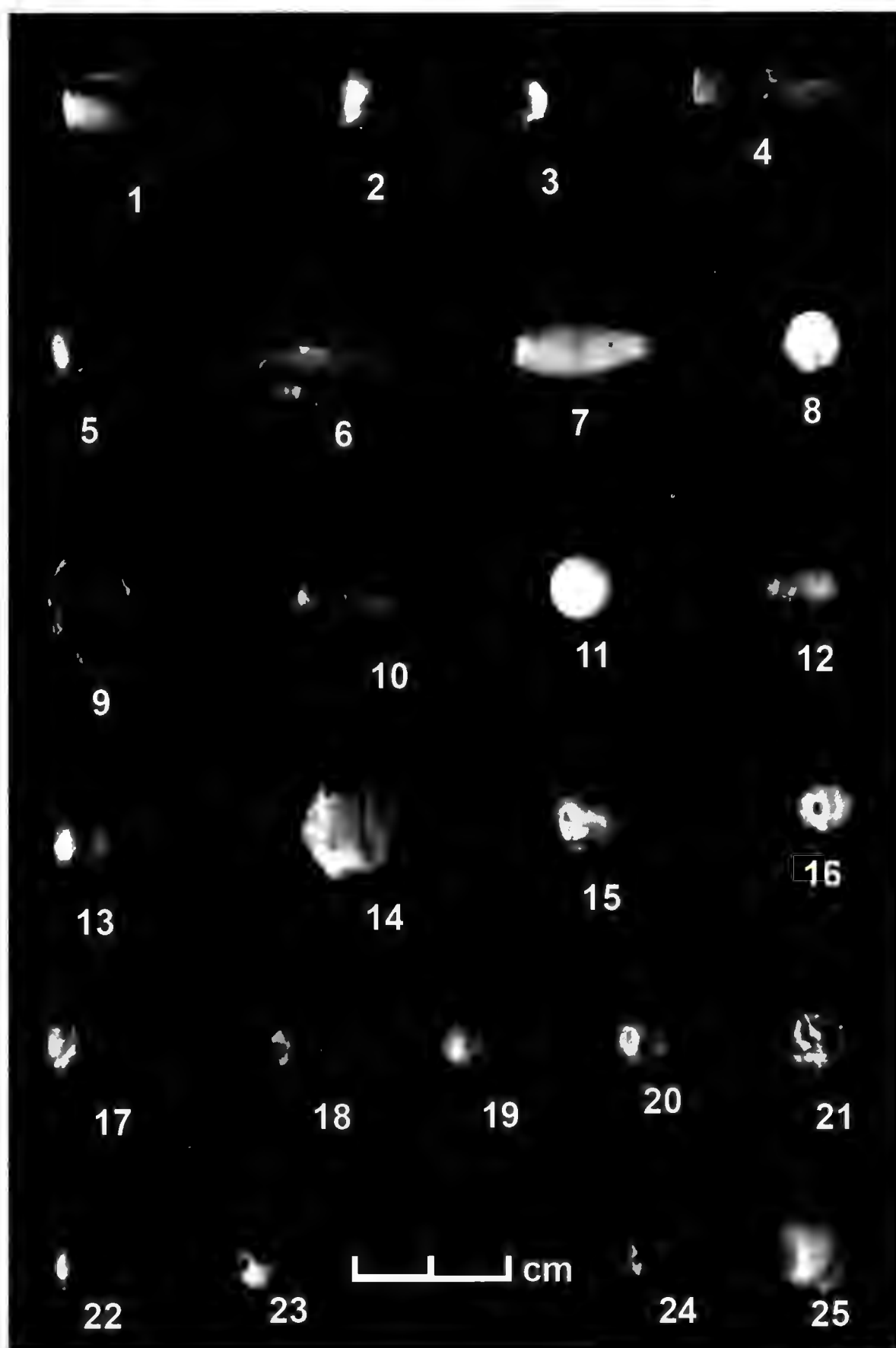
29. Attempted square cylindrical bead, stage II, period V, Reg. No. 8462.

30. Attempted tabular bead, stage IV, period V, Reg. No. 10241.

(iv) UNFINISHED CARNELIAN BEADS

(Pl. 10.15; Fig. 10.15)

1. Attempted barrel bead, stage III, period V, Reg. No. 5969.



Pl. 10.15 : Unfinished carnelian beads

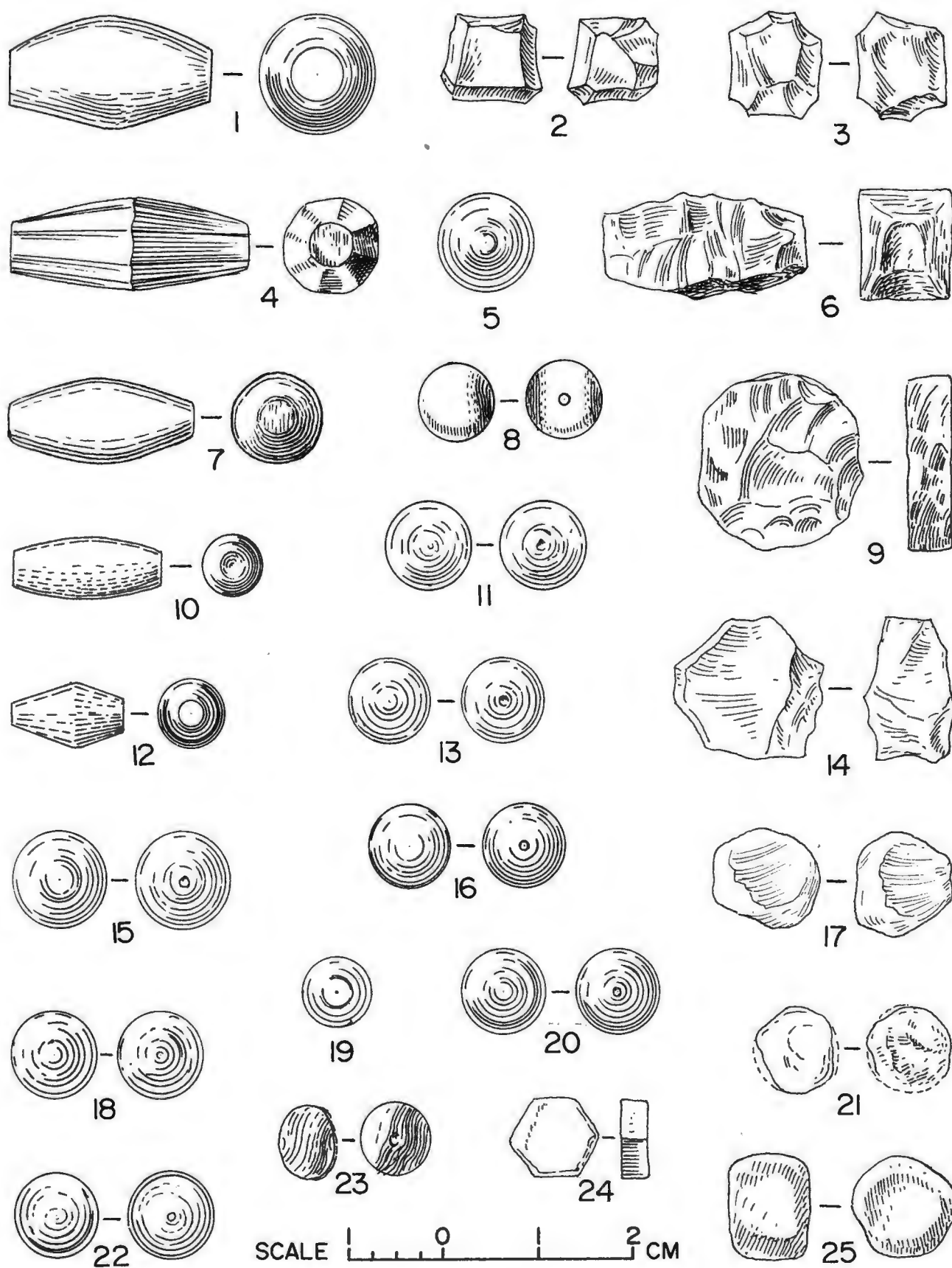


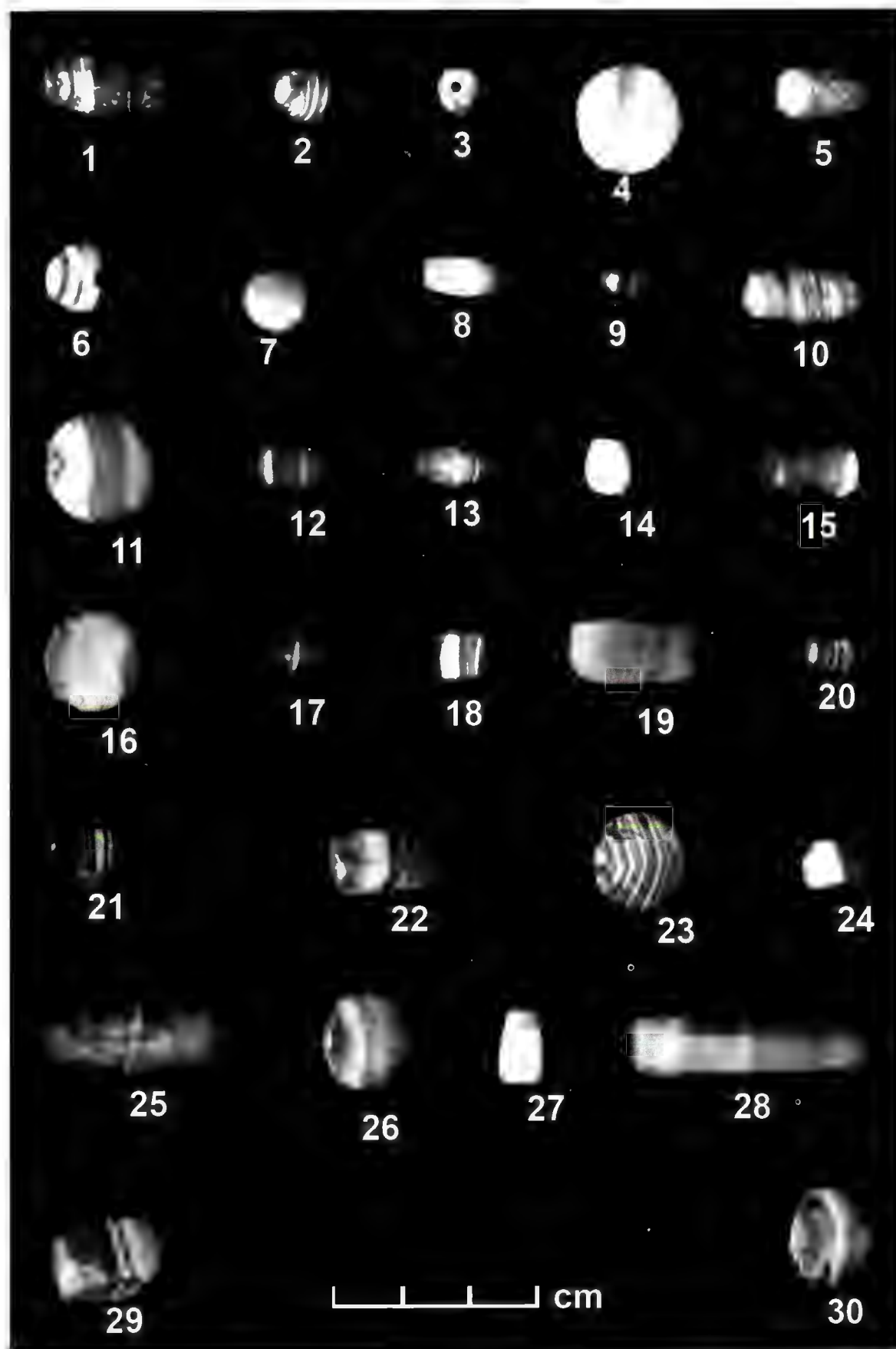
Fig. 10.15 : Unfinished carnelian beads

2. Attempted cubical bead, stage I, period V, Reg. No. 355.
3. Attempted bead, indeterminate shape, stage I, period V, Reg. No. 13104.
4. Attempted facettled bicone bead, stage III, period V, Reg. No. 11141.
5. Attempted spherical bead, stage III, period V, Reg. No. 11019.
6. Attempted square barrel bead, stage I, period V, Reg. No. 9562.
7. Attempted barrel bead, stage III, period V, Reg. No. 871.
8. Attempted spherical bead, stage IV, period V, Reg. No. 3967.
9. Attempted tabular bead, stage I, period V, Reg. No. 2640.
10. Attempted barrel bead, stage III, period V, Reg. No. 11509.
11. Attempted spherical bead, stage III, period V, Reg. No. 6134.
12. Attempted spherical bead, stage III, period V, Reg. No. 9720.
13. Attempted spherical bead, stage III, period V, Reg. No. 13435.
14. Attempted bead of indeterminate shape, stage I, period V, Reg. No. 12125.
15. Attempted spherical bead, stage III, period V, Reg. No. 1753.
16. Attempted spherical bead, stage IV, period V, Reg. No. 6247.
17. Attempted bead of indeterminate shape, stage I, period V, Reg. No. 528.
18. Attempted spherical bead, stage III, period V, Reg. No. 11512.
19. Attempted spherical bead, stage III, period V, Reg. No. 8139.
20. Attempted spherical bead, stage IV, period V, Reg. No. 5114.
21. Attempted spherical bead, stage I, period V, Reg. No. 528 (B).
22. Attempted spherical bead, stage III, period V, Reg. No. 12459.
23. Attempted elliptical bead, stage IV, period V, Reg. No. 182.
24. Attempted hexagonal tabular bead, stage II, period V, Reg. No. 5778.
25. Attempted cubical bead, stage I, period V, Reg. No. 2104.

(v) UNFINISHED AGATE BEADS

(Pl. 10.16; Fig. 10.16)

1. Attempted barrel bead, partly damaged, stage II, period V, Reg. No. 7562.
2. Attempted barrel collared bead, stage III, period V, Reg. No. 12485.
3. Attempted tabular bead, damaged, stage II, period V, Reg. No. 4223.
4. Attempted tabular bead, stage II, period V, Reg. No. 6019.
5. Attempted barrel bead, stage II, period V, Reg. No. 22936.
6. Attempted barrel bead, half broken stage II, period V, Reg. No. 3506.
7. Attempted tabular bead, stage IV, period V, Reg. No. 4462.
8. Attempted barrel bead, stage III, period V, Reg. No. 1696.
9. Attempted spherical bead, stage IV, period V.
10. Attempted tabular bead, stage II, period V, Reg. No. 1493.



Pl. 10.16 : Unfinished agate beads

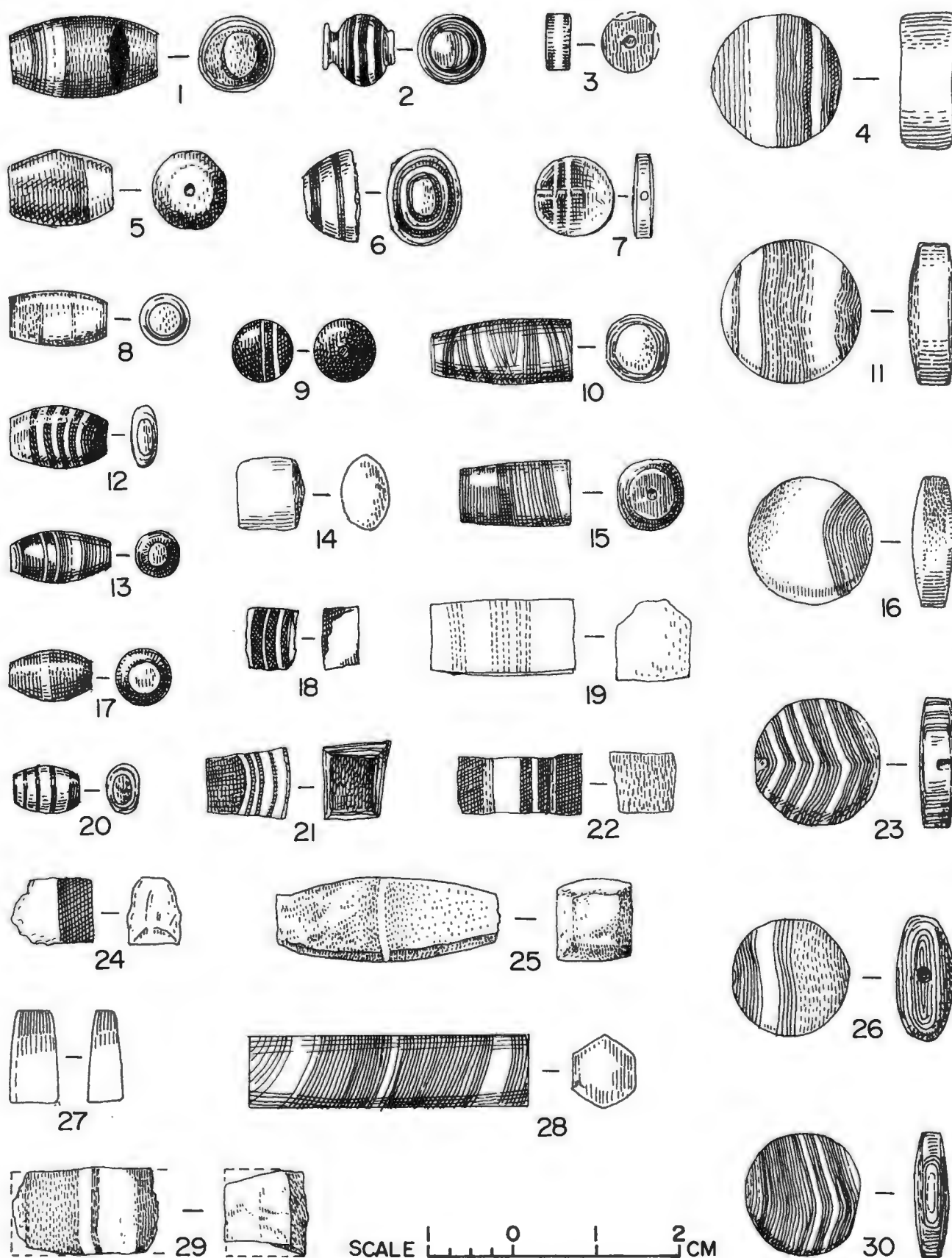


Fig. 10.16 : Unfinished agate beads

11. Attempted tabular bead, stage III, period V, Reg. No. 6020.
12. Attempted barrel bead, stage III, period V, Reg. No. 738.
13. Attempted barrel bead, stage III, period V, Reg. No. 6139.
14. Attempted square biconvex bead, stage II, period V, Reg. No. 110.
15. Attempted cylindrical bead, stage III, period V, Reg. No. 5093.
16. Attempted barrel bead, stage III, period V, Reg. No. 6081.
17. Attempted cubical bead, stage III, period V, Reg. No. 7468.
18. Attempted cubical bead, stage I, period V, Reg. No. 192.
19. Attempted square cylindrical bead, stage I, period V, Reg. No. 8461.
20. Attempted barrel bead, stage III, period V, Reg. No. 3697.
21. Attempted square cylindrical bead, stage I, period V, Reg. No. 563.
22. Attempted square cylindrical bead, stage I, period V, Reg. 10807.
23. Attempted tabular bead, stage IV, period V, Reg. No. 10166.
24. Attempted tabular bead, stage I, period V, Reg. No. 1066.
25. Attempted square barrel bead, stage I, period V, Reg. No. 8365.
26. Attempted tabular bead, stage IV, period V, Reg. No. 5210.
27. Attempted conical pendulous bead, stage III, period V, Reg. No. 11659.

28. Attempted hexagonal cylindrical bead, stage III, but partly polished, period V, Reg. No. 1685.

29. Attempted square cylindrical bead damaged, stage I, period V, Reg. No. 331.

30. Attempted tabular bead, stage III, period V, Reg. No. 1995.

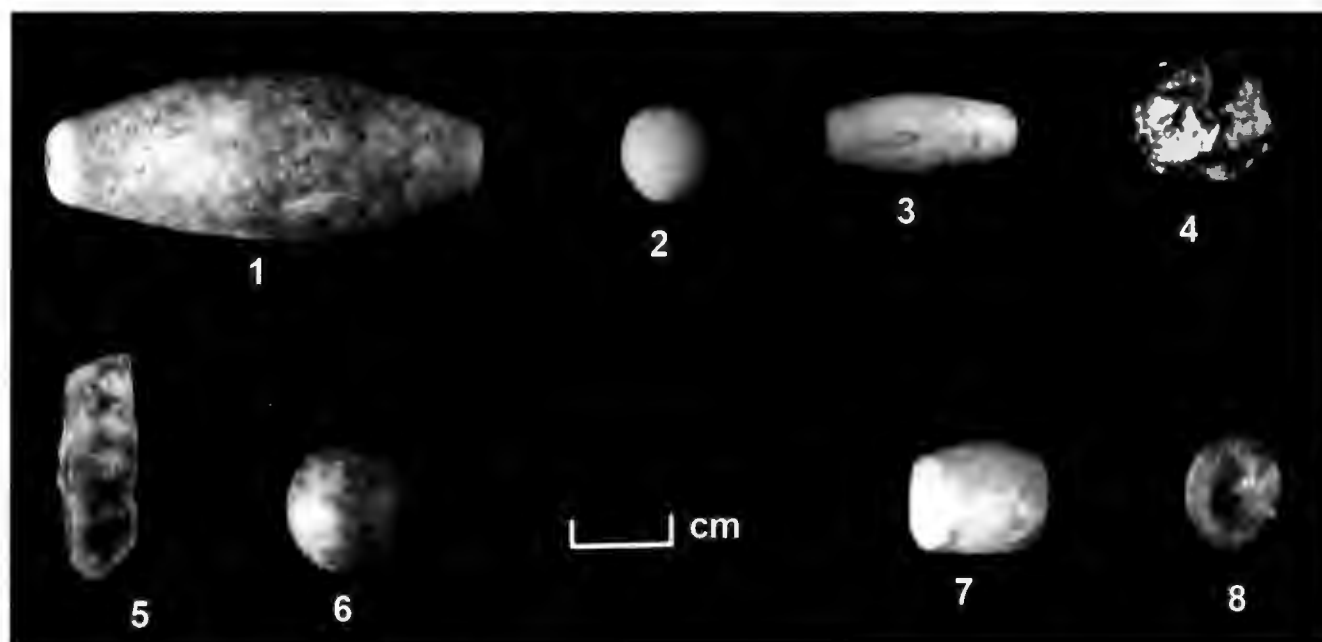
(vi) UNFINISHED ASSORTED BEADS

(Pl. 10.17; Fig. 10.17)

1. Attempted barrel bead, quartz, stage III, period V, Reg. No. 10489.
2. Attempted spherical bead, quartz, stage II, period V, Reg. No. 3118.
3. Attempted barrel bead, chert, stage IV, period V, Reg. No. 8714.
4. Attempted spherical bead, amethyst, stage I, period IV, Reg. No. 6782.
5. Attempted cylindrical pendulous, stage I, period V, Reg. No. 6677.
6. Attempted spherical bead, sand stone, stage II, period V, Reg. No. 9391.
7. Attempted cylindrical bead, chert, stage II, period V, Reg. No. 1571.
8. Attempted disc bead, glass, stage III, period V, Reg. No. 4361.

P. BULLAE

The *bullae* have a fairly wide distribution in different parts of India, for example at sites like Rajghat, Koshambi in Uttar Pradesh, Ujjain, Vidisha, Chakerbedha in Madhya Pradesh, Sisupalgarh in Orissa, Kondapur, Nagarjunakonda in Andhra Pradesh and Chandravalli in Karnataka. It is worth noting that Maharashtra has the privilege of reporting *bullae* from maximum number of sites which demonstrate a close knitted distribution pattern both in time and space.



Pl. 10.17 : Unfinished assorted beads

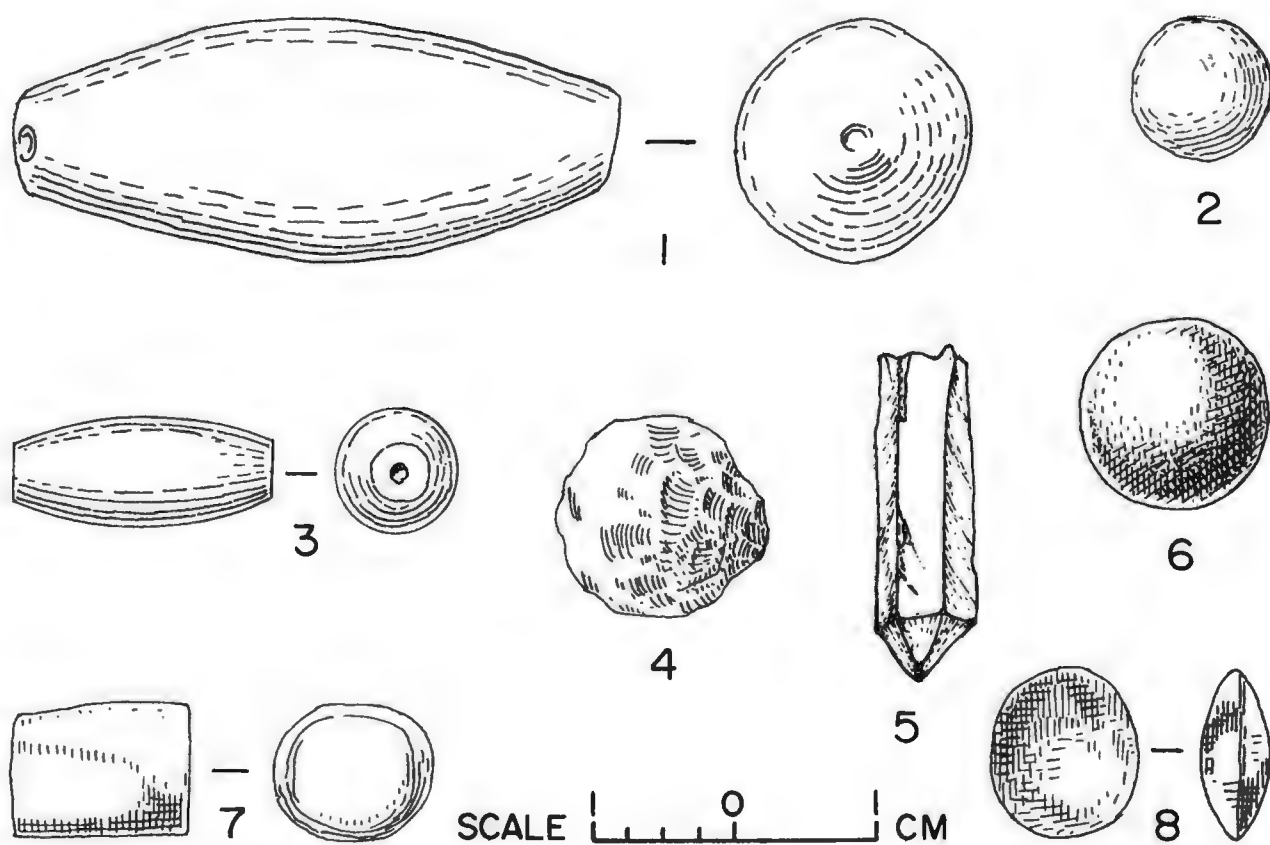


Fig. 10.17 : Unfinished assorted beads

In addition to the Roman silver coin *bullae* described below along with other Roman silver coins (see p. 819), the site has reported proto types of *bullae* on materials like clay and faience. These objects appear to be local imitations from the *aurei* and *denarii*, issued either by Augustus or Tiberius and showing a somewhat indigenous portrayal of the royal bust on the obverse, and the Graeco-Roman deities on the reverse. Invariably of circular shape, these are casts from double moulds, made by cementing together two different casts, back to back. But, technically speaking, with regard to suspension, two categories have been formed; an example in terracotta found from layer 3 shows a perforated projection of cylindrical shape attached, horizontally, to the top of a circular disc (Pl.10.18-1) while others without any attachment have been recorded from layers 2 and 1 and show two holes pierced side by side on the top portion of the disc (Pl.10.18-3,4). Broadly speaking, the former type may be compared with the Sisupalgarh¹ findings while the later with Bhokardan². The stratigraphical position and frequency of occurrences of these *bullae* demonstrate that the former type, qualitatively far superior to the later, remained quantitatively inferior perhaps for simple reason that the former required more technical accomplishment than the latter. The solitary specimen of the former type is a tiny terracotta piece showing a grooved attachment joined to a disc, now broken, displaying on either side a circular beaded band flanked by two concentric lines along the flan. With regards to the central figure nothing substantial can be said. However, the possibility of either an animal or a diadem bust of a king may not be ruled out (Pl.10.18-1). Such type of representations may

be compared with Kondapur and Ter finds³.

In the later type, besides the Roman silver coin *bullae*, there are four specimens, two of which are of baked clay (Pl. 10.18-2,3), one of faience (Pl. 10.18-4), and one of glazed variety showing red terracotta core (Pl. 10.18-5). On the basis of the reverse device two of these may safely be called imitations of Tiberius (Pl. 10.18-4,5), and one of Augustus (Pl. 10.18-2); the reverse device on the fourth specimen is feeble and so nothing substantial can be said about it (Pl. 10.18-3). However, it vaguely gives an impression of two standing figures, which may tentatively be compared with the reverse device of Tiberius coin⁴. The diameter of the latter type of *bullae* varies marginally from 18 mm to 20 mm and its thickness from 3.25 mm to 4 mm.

An analogous terracotta mould, possibly used in producing imitations of the Roman coin *bullae*, has been discovered in the same deposit in which the actual prototypes were found. Almost circular in shape measuring 24 mm to 26 mm in diameter it bears, in sunken relief, a bust in negative of a sovereign to left (Pl. 17.85) as obverse device. The diameter of the incuse measuring 21 mm and the height of the bust measuring 14 mm are apparently consistent with the measurements noted in the case of silver, clay and faience *bullae*. In fact, no cast from this mould has been reported. Nevertheless, the above finding supports the possibility of a local enterprise of imitating Roman coin *bullae* to meet the demand⁵.

The five specimens are described below:

(Pl. 10.18)

1. *Obverse*: Fragmentary terracotta *bullae* showing a portion of disc with a

1. B.B. Lal, Sisupalgarh 1948: An Early Historical Fort in Eastern India, *AI*, 5, 1949, pp. 101-102, pl. L A & B.
2. S.B. Deo and R.S. Gupte, *Excavations at Bhokardan (Bhogavardhana)*, Nagpur-Aurangabad, 1973, pp. 74-77, pl. XXXII 1-6.
3. S.B. Deo, Roman Trade: Recent Archaeological

Discoveries in Western India, *Rome and India: The Ancient Sea Trade (RIAST)*, eds. Vimala Begley and R.D. De Puma, Delhi, 1992, figs. 3.1 & 2.

4. R.A.G. Carson, *Coins of the Roman Empire*, London, 1990, pl. 1.4.
5. Amarendra Nath, A Portrait Coin-Mould from Adam, *JNSI*, 54, 1992.

perforated attachment grooved at the top. The disc has beaded border within concentric lines, forming a circular frame.

Reverse: Details tallies with the obverse.

Size: 10 × 12 × 3.5 mm, Reg. No. 2260.

2. *Obverse:* Portrait of a king to right within a circular beaded frame of concentric line, feeble impression of the legend exists on either side of the face.

Reverse: Calus and Lucius stand flanking two shields, crossed spears and priestly instruments, feeble impression.

Size: Dia. 20.5 mm, Thickness: 3.75 mm, burnt to dull black, core grey, upper part slightly broken, Reg. No. 4880.

3. *Obverse:* Portrait of a king to right within a circle of dots, two holes above the head perforated for threading.

Reverse: No details visible other than the circular beaded frame marked along the flan.

Size: Dia. 20 mm, thickness: 3.25 mm, burnt to dull black, core grey, well preserved, Reg. No. 9495.

4. *Obverse:* Emperor's portrait to right

within a circular frame, two holes above the head perforated for suspension.

Reverse: Livia seated over a throne to right within a circular frame of dots, holding a spear in her right hand and a twig of corn in left.

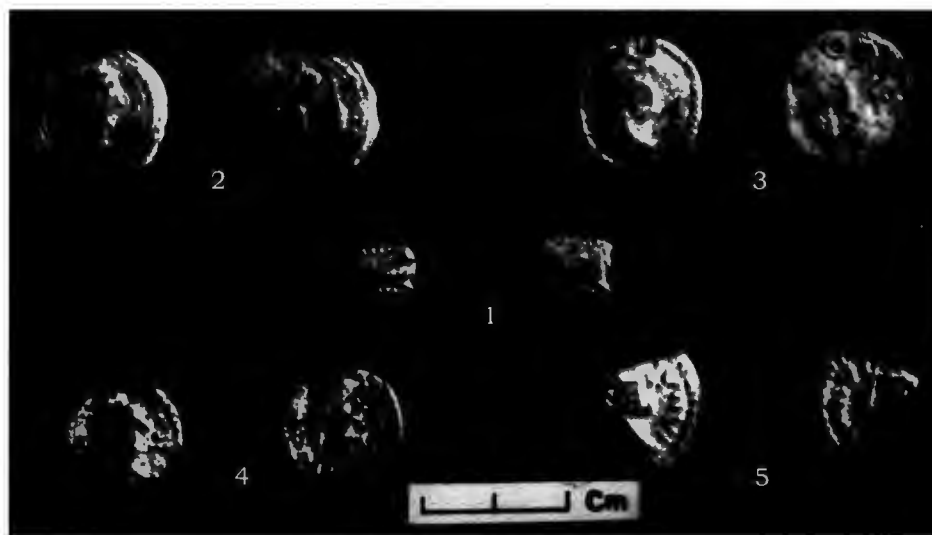
Size: Dia. 18 mm, thickness: 3.25 mm, Reg. No. 7732.

5. *Obverse:* Emperor's face to right, partly visible, feeble impression of the legend seen inside the beaded border.

Reverse: Livia to right, partially visible, seated over a throne with her usual attributes within a beaded circular frame.

Size: 17.25 × 16.5 × 4 mm, Reg. No. 9139.

The number of these *bullae* is too meagre to discern any conclusive intra-site distribution pattern; however some tentative patterns may be worked out with regard to the Roman silver coins and *bullae*. The coins and *bullae* with cylindrical attachment (Reg. No. 2260) start occurring from layer 3 and have been found in the southern sector of the habitation, while the clay, glazed terracotta, faience and silver coin *bullae* start occurring in the upper most layer and have been reported in the northern part of the habitation.



Pl. 10.18 : Bullae

XI

TERRACOTTA OBJECTS

A. INTRODUCTION

Clay as a medium of creative art has its beginning from prehistoric period onwards. Traditional sources start referring to potter's art since Vedic period. A number of hymns occurs denoting class of potters engaged either in fine pottery making and figurine. *Yajura Veda* refers to Sinivali who has been associated with Rudra and Vasu in the production of terracotta figurines with hands:

*Sansristam vasubhi rudraih
karmanyam mridam | hastabhyam
mridvim kritva sinivali krinotu tam ||*¹

The Kautilya's *Arthashastra* bears a testimony to the preparation of clay images of Naga Deva. Similarly *Brahma Purana* refers to a clay figurine of a lion. A variety of terracotta toy models such as birds, animals, chariots, boats etc. figure in *Kashyap Samhita* suggesting its manufacture as play items for the infants. Likewise, *Divyavadana* mentions about terracotta toys. *Katha Sarit Sagar* infers about white terracotta model of an elephant which possibly reminds the making of toy models of kaolin. Apart from traditional sources, there are epigraphical inferences of potters' guild (*Sreni Kularikas*), potters' colony (*Kumharaveda*) etc².

The Jain tradition *Pratishtanapura Kalpa* of circa 13th century CE. infers about a Satavanaha prince spending his time in a potter's workshop engaged in preparing clay figurines of elephants, horses, chariots and warriors as his early days amusement³.

The terracotta objects found from the excavations may broadly be categorized as secular and religious. These can further be classified in the following categories: human and animal figurines, models of toy, ornaments, and objects of architectural, domestic and industrial usage. The excavations at Adam have reported diverse variety of terracotta art objects of high quality of modeling both handmade and moulded. These finds indicate a section of people earned their livelihood by practicing the terracotta craft. Incidentally, there is an inference in *Anguttara Nikaya* (III 363) about earning by practicing the craft (*Sippadhittana*)⁴.

Majority of the quality products are reported from period V when the site witnessed overall growth in terms of economy and arts and crafts. The kaolin terracotta, typical to the Satavahana period is relatively meagre at the site as compared to other parts of Deccan. Apart from kaolin, the other moulded varieties in terracotta are vibrant and vivid in expression showing largely native style whereas a few outlandish. Some of the terracotta figurines showing alien features indicate high standard of replication, amalgamating contemporary traditions of the Deccan School of Satavahana Art⁵. Such experiments on the part of the Satavahana artists demonstrate their

1. R.C. Sharma, Art Motifs as seen in the Vedas, *Citi-Vithika: Journal of Art History, Culture and Literature*, 3 (1-2), 1997-98, p. 36.
2. U.P. Shah, A reference to Toys in Kashyap Samhita, *Journal of M.S. University, Baroda*, V (1), 1956, pp. 1-5; S.C. Kala, *Terracottas in the Allahabad Museum*, 1980, New Delhi, p. 3; Urmila Sant, *Terracotta Art of Rajasthan from Pre-Harappan and Harappan times to the Gupta Period*, 1997, New Delhi, pp. 4-7.

3. M.N. Deshpande, Satavanaha Terracotta Art: With Special Reference to Ter, *The Age of the Satavahanas*, ed. Ajay Mitra Shastri, New Delhi, 1999, p. 478.
4. R.S. Sharma, *Sudras in Ancient India*, 1958, Delhi, p. 88.
5. M.N. Deshpande, A Plea for the Deccan School of Satavahana Sculpture, *Seminar on Indian Art History*, ed. Moti Chandra, 1962, New Delhi, pp. 16-25.



Pl. 11.1 : Early terracotta human figurines

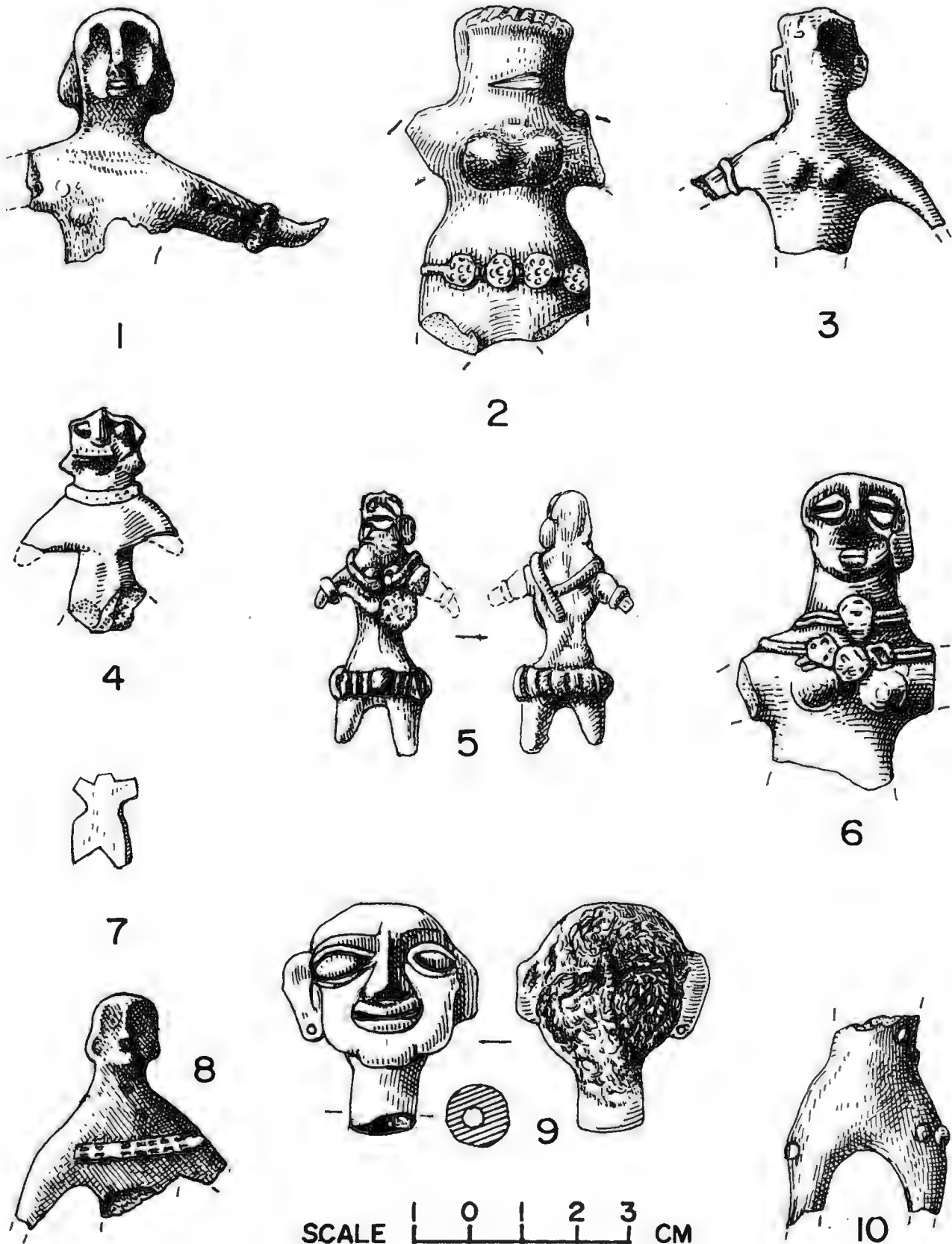


Fig. 11.1 : Early terracotta human figurines

artistic merit¹. A few of the examples illustrated in the report share some distinct artistic features, such as: clock-turned hair-curls harmoniously tied with a cloth-band knotted on the left side of the head, elongated face, aquiline nose with puffy nostrils, well cushioned moustache with drooping ends, lips with prominent pout and U-cut deep chin. The treatment of the eyes, unlike the Satavahanas, shows an inert expression through their sunken but wide-open eyes with outsized eye-balls and partially cambered eye brows; the eye lids are generally drawn in the shape of an almond with a few exceptions where the inner tips are seen to terminate in a short beak; the exalted forehead is more flattish than curved. All these stylistic compositions create an impression of Graeco-Roman idiom of the Classical era.

Apart from the terracotta of Graeco-Roman idiom, there are some other figurines with outlandish ethnic features, mainly faces, remains to be identified conclusively. The occurrences of such types of figurines with outlandish ethnic features might be due to the foreign interactions taken place during the early centuries of the Common Era. The terracotta artist must have come in contact with these unfamiliar faces and out of their artistic instinct, copied their facial features in the plastic form of art. A few examples of such figurines have been illustrated appropriately in this chapter.

A unique male figurine modelled in striding manner suggests some violent action, representing *malla* (combat) type (Reg. No. 2102). The figure has his left arm stretched backward while the right is damaged, still indicate its placement along the corresponding thigh. The feet are without toes display the body weight resting over the right leg whereas left is stretched backward. The spread-out body

posture indicates combat gesture forming a separate group of terracotta art.

Usage of double mould in the production of terracotta figurine is a characteristic feature of the Satavahana period which helped in producing the figure in round. Generally, the double moulds bear front and rear view in negative of a figurine. As a non sticky substance, a thin layer of talc like dust is generally applied before pressing the fine lavigated layer of clay in each of these moulds so as to remove the cast smoothly.

Among human and animal figurines, majority of the horse figurines are casts of double moulds and of which both the parts are joined on the sides by a fine ribbon of clay². After removing the cast separately, the out products of the moulds are luted together and fashioned by paring the finished product.

There is a mix of human and animal figurines where fine and medium to coarse fabric have been used in the production. Besides a few examples of single mould, there are handmade varieties; some of them are archaic in nature. The archaic variety of human figurines shows grotesque face with pinched nose and ears, bulging eyes, appliqué ornamentation of inadequate proportions. The appliqué variety of terracotta is reminiscent to Harappan idiom which reappeared during the Mauryan period and continues even today. One of the handmade specimens (Reg. No. 6577) of a head shows an elongated portion of the neck bearing a hole which suggests use of twig as an armature for attaching the head with the body. Incidentally, the concept of armature has been noticed in the terracotta art of the Harappan period which continues to be in vogue even today. The site has also yielded a specimen of hollow terracotta

1. M.N. Deshpande, Classical Influence on Indian Terracotta Art, *Le Rayonnement des civilisations grecque et romaine sur les cultures peripheques*, 1965, Paris, pp. 603-610.

2. M.K. Dhavalikar, Paithan Terracottas, *Journal of the Indian Society of Oriental Art*, VII, 1975-76, pp. 62-69; M.K. Dhavalikar, *Masterpieces of Indian Terracottas*, Bombay, 1977, p. 30.

(Reg. No. 11086), the tradition of which dates back to the Harappan period. There is a solitary example of human figurine dressed out of black slipped ware (Reg. No. 2630).

B. EARLY TERRACOTTA HUMAN FIGURINES

Examples of some early terracotta human figurines are described below. Stylistically these specimens may safely be placed in period IV as they do not fall in the ambit of the Satavahana terracotta idiom. Largely, these specimens are ill-fired and of coarse to medium fabric.

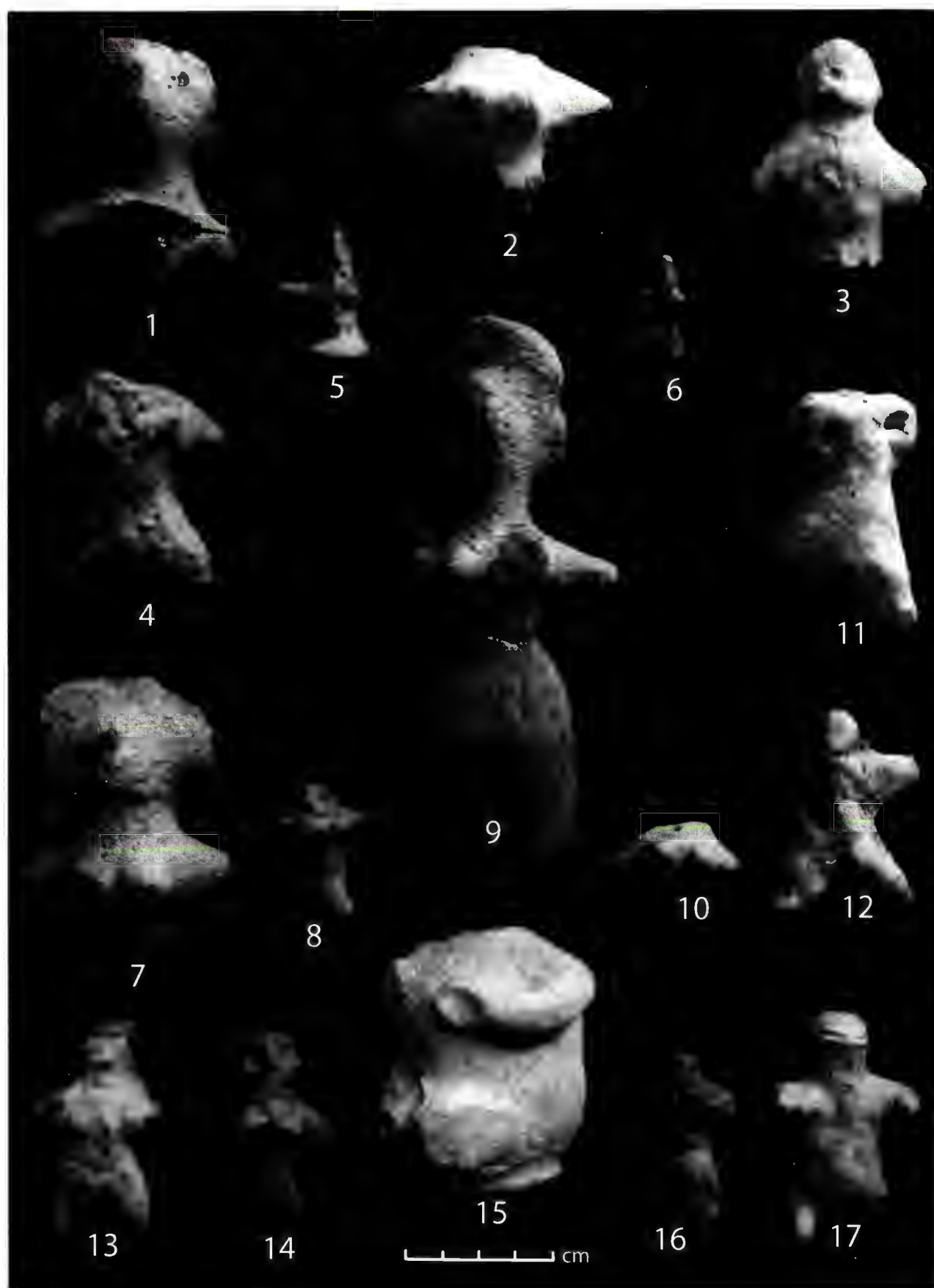
Among the hand modelled examples, a couple of terracotta figurines (Reg. No. 7385 and 3731) have perforation across the length of the body which indicates some religious purport. These figurines remind the findings made at Inamgaon wherein male and female figurines have been found with blind hole in the body found in ritualistic context¹.

(Pl. 11.1; Fig. 11.1)

1. Upper portion of a female figurine, with aquiline type of pinched nose and fan shaped ears showing extended left hand with palm upturned, bedecked with wristlet attached with grooved band of appliqué variety (Reg. No. 12352).
2. Female figurine with damaged limbs, squarish featureless stumpy head resting over the shoulders. Combed hair strands forming a small chignon at the back of the head, small breasts softly treated; around the waist a girdle bedecked with three rosettes of appliqué variety (Reg. No. 3113).
3. Upper portion of a female figurine, showing pinched nose and ears, head is luted over the shoulders, both the hands are extended downwards, right
- arm showing band of an armlet of appliqué variety, breasts are prominent but partially dislodged (Reg. No. 9429).
4. Human figurine showing damaged limbs, undefined forehead; the facial features comprise of pinched nose, bulging eyes, with partially open lips; the head is luted to a drooping shoulders; the neck is bedecked with a necklace of appliqué variety (Reg. No. 4810).
5. Female figurine showing elaborate features and ornamentations, facial features show undefined forehead and neck, less prominent nose, appliqué eyeball, mouth partially open; head is luted to drooping shoulder; wears ornaments of appliqué variety like a heavy duty *patrakundala*, necklace with a locket, armlet, girdle; right arm is stumpy while left arm is damaged and the legs are shaped apart (Reg. No. 11640).
6. Upper portion of a female figurine, showing pinched blunt nose, lips marked by slitted pellet, slitted appliqué eyeballs; wears two necklaces of appliqué variety; one is tied to neck show an ovalish shaped amulet, while the one across the shoulder has three rosette pendants resting over the breasts, strung by double stranded strings; both the hands and portions below navel damaged (Reg. No. 7853).
7. Black slipped sherd dressed to show a headless figurine with chopped upper limbs raised upwards and legs apart fall in the genre of *uttanahasta* and *uttanapada* showing gesture of mother goddess of prehistoric period² (Reg. No.

1. M.K. Dhavalikar, *The First Farmers of the Deccan*, Pune, 1988, p. 57, pls. 25 & 27.

2. Such divinities have been identified as *Chhinnamasta* worshiped for warding off droughts and as *Shakambhri* as goddess of vegetative fertility, M.K. Dhavalikar, *Sakambhri - The Headless Goddess*, *Annals of the Bhandarkar Oriental Research Institute*, vol. LXVIII, 1987, pp. 281-293. Anthropomorphic figurines dressed out of pottery have also been reported from Chichali; Nandini



Pl. 11.2 : Early terracotta human figurines

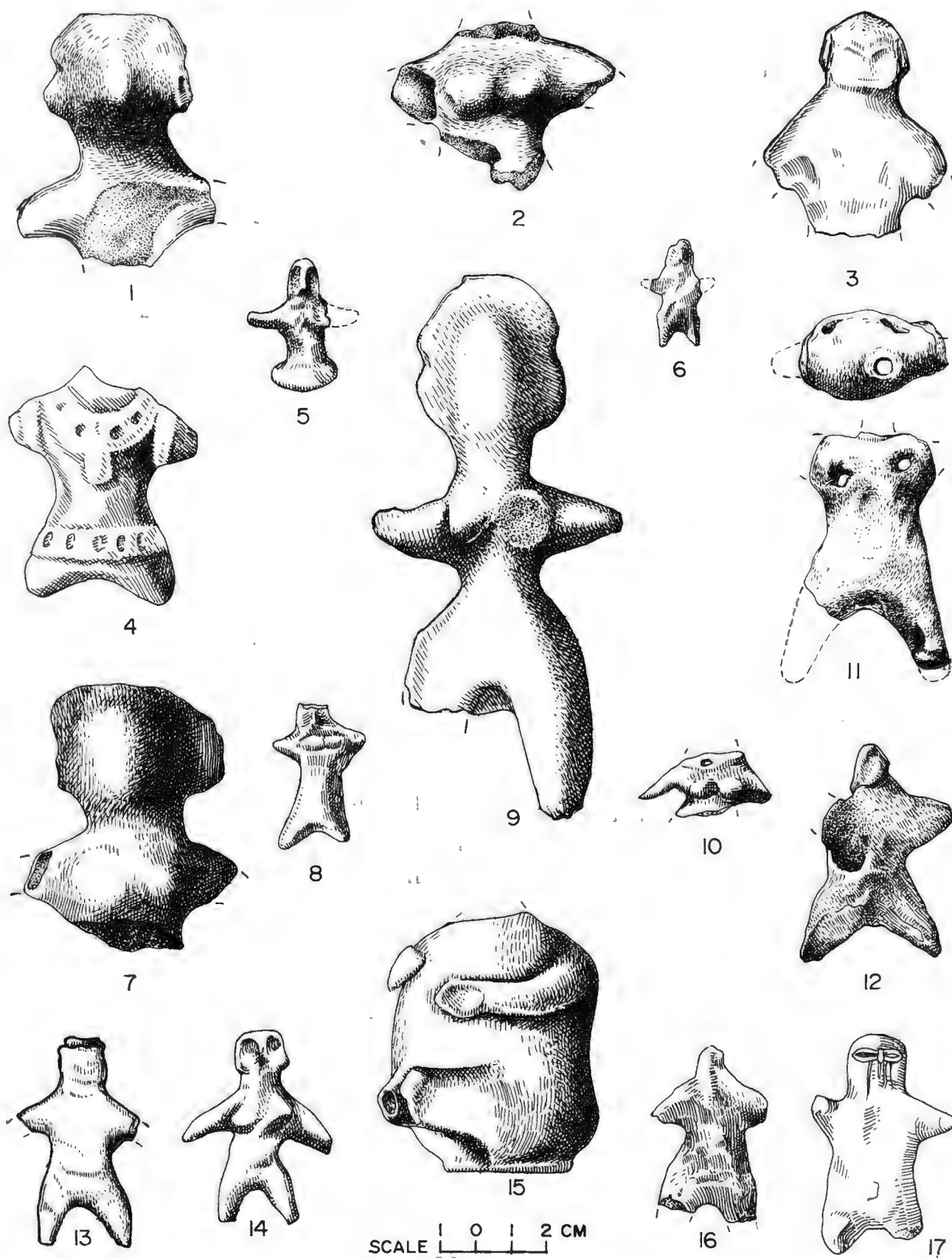


Fig. 11.2 : Early terracotta human figurines

2630). At times, she has been identified also as *Lajja Gauri*.¹

8. Upper part of a male figurine, facial feature are less prominent marked by shallow depressions of eyes, pinched nose and ears; head luted to drooping shoulders; damaged hands shown suspended; a chain like ornament across the drooping shoulder.
9. Male head showing prominent facial features like aquiline nose, bulging eyes with deep incisions, fan-shaped right ear lobe with a perforation, broad forehead, lips parted with deep cut mark. Projected neck bears a hole suggesting use of twig as an armature for attaching the head with the body (Reg. No. 6577).
10. Human figurine showing portions below the navel with legs apart, there are a few appliqué pellets suggesting waist ornament, i.e. *mekhala* (Reg. No. 2779).

(Pl. 11.2; Fig. 11.2)

1. Human figurine, portions below shoulder damaged; head flattened into a fan-like feature; right ear marked; a conical projection in the centre denotes facial features; other features absent (Reg. No. 3766).
2. Female figurine of which a major portion is damaged, it shows the features of an attenuated body with heavy breasts (Reg. No. 3545).
3. Upper portion of a male figurine showing feeble facial features, ears partially pinched; head rests over drooping shoulder (Reg. No. 3092).
4. Torso of a female figurine, wears

necklace comprising of a beaded band with a pendant, armlet and a girdle of appliqué variety; stumpy hands and legs (Reg. No. 2300).

5. Stumpy female figurine, with a flat base suggesting seated feature; stumpy right arm extended parallel to the shoulder, left breast seen while the right dislodged (Reg. No. 4978).
6. Small sized human figurine showing pinched nose, stretched hands and slightly bent legs stretched apart (Reg. No. 12658).
7. Bust of a female figurine, head shows halo-like feature; other facial features are wear away; while the breasts are relatively prominent (Reg. No. 11635).
8. Small headless female figurine, showing short stumpy limbs; appliqué short button breasts (Reg. No. 11393).
9. Female figurine with damaged left breast, right arm and leg; showing fan shaped head gear features; the facial features are wear away; stumpy left hand; attenuated body features, broad hips, deserves mention (Reg. No. 9215). The head gear resembles with the specimens from Taxila².
10. Female figurine, largely damaged, showing portions of right hand, breasts, and perforations across the body (Reg. No. 7385).
11. Headless male figurine, showing unequal treatment of upper limbs merging into body, while the legs apart are stumpy, right one damaged (Reg. No. 3731).
12. Male figurine, elongated featureless head, showing sign of pinched nose, right hand damaged, and left hand stumpy, while legs are disposed in striding manner (Reg. No. 2102).

Bhattacharya Sahu, Anthropomorphic Figurines from Chichali: Some Observations, *Puratattva*, 30, 2000, pp. 56-57, fig. 1.

1. Amarendra Nath, *Lajja Gauri* and her Possible Genesis, *Lalit Kala*, 25, 1990, pp. 42-47.

2. A. Ghosh, Taxila (Sirkap), 1944-45, *AI*, 4, 1947-48, p. 77, pl. XIV-14.

13. Female figurine, with stumpy arms and legs apart, other features are abraded (Reg. No. 5367)
14. Female figurine, with stumpy arms and legs apart, head is tilted to right, eyes formed by depression, nose by pinching, head rests over drooping shoulder, the total configuration of the image gives an impression of *tribhanga* (Reg. No. 7112).
15. Hollow pot bellied terracotta figurine showing arms attached to the body, with a spout in the belly at the point of navel (Reg. No. 11086).
16. Headless male figurine with drooping shoulders showing stumpy limbs, other body features are abraded (Reg. No. 2049).
17. Male figurine, round head, eyes marked by slit, hands curved in front, and vertical incisions below eyes gives a weeping appearance, legs short, partially curved in front.

C. MOULDED HUMAN FIGURINES

The excavations have yielded human figurines both of single and double mould from the horizons attributed to period V. The single mould terracotta are generally solid in makeup while the double mould hollow. The tradition of making figurines in round starts from the Mauryan period, but it matures in the Satavahana period. Examples of terracotta figurines of regular clay are more in number than the kaolin ones as the quarry is located distantly from the site (Reg. No. 10203 and 2210). Kaolin terracotta are considered as a diagnostic type which helps in determining the stratigraphic context of the Satavahana occupation.

The male and female figurines have been given equal artistic delineations marked by heavy noses, wide nostrils, and bare body, bedecked with moderate

jewelry. In case of female figurines, the breasts have been modelled softly. Lower part of the body is covered by loin clothes called *ardhourka* or dhoti. In one of the specimens, a female figurine is shown wearing a sari with central pleats (Reg. No. 2934).

The head gears of males and coiffures of females have been drawn elaborately; likewise the jewelries have been conceived in detail. The types of necklaces are *kanthi* around the neck, *stanahara* over the breasts, and *mala* pendent over the abdomen, besides *upavita* and *ekavali* worn across the body. The arms are bedecked with *keyura* (armlets) and wristlets. Apart from these, the male and female figurines have often been shown wearing elaborate to moderate *mekhala* or *kamarabandh* (waist band), anklets etc.

The site has reported cult figurines in the form of mother goddess showing her hands stretched up and legs apart, (Reg. No. 8972) denoting "fertility" figurines, prototypes of the *nagna nayika* or *Lajja-Gauri*¹. The tradition of such figurines dates back to protohistoric period².

A couple of *mithuna* figures showing a male and a female standing side by side deserve special mention, as such type of terracotta figurines are typical to the Ganga plain, although their occurrence is relatively meagre. Though the religious significance is vague, some have related the concept to the depiction of the ideal 'man-and-women' figures and *dampati* (husband-and-wife)³ besides counsellor, companion and pupil.⁴ The specimens

1. K.V. Soundrarajan, *Nagarjunakonda (1954-60)*, vol. II (The Historical Period), MASI 75, New Delhi, 2006, p. 359, pl. CXIX, fig. 113.

2. Amarendra Nath, *Lajja Gauri and her possible genesis*, *Lalit Kala*, 25, 1990, pp. 42-47.

3. V.S. Agrawala, *Terracotta Figurines of Ahichchhatra*, District Bareilly, U.P., *AI*, 4, 1947-48, pp. 109-110.

4. C. Sivaramamurti, *Sanskrit Literature and Art-Mirrors of Indian Culture*, MASI, 73, 1955, p.13.



Pl. 11.3 : Moulded human figurines



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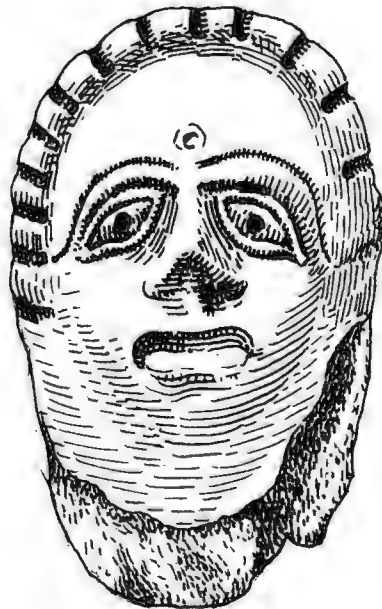
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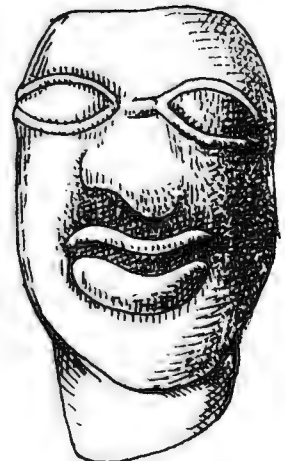
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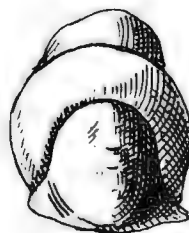
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Fig. 11.3 : Moulded human figurines

illustrated here may fall in the category of *mithuna* (Reg. No. 4797) and *dampati* (Reg. No. 2934). To us, the *mithuna* figures are those where female is shown to the right side of the male counterpart while in case of *dampati*, the arrangement of depiction is reversed. Interestingly, the *dampati* specimen found at the site shows that the male counterpart is shown pressing the right leg of the counterpart with his left leg which apparently resembles some rituals related to marriage ceremony.

(Pl. 11.3; Fig. 11.3)

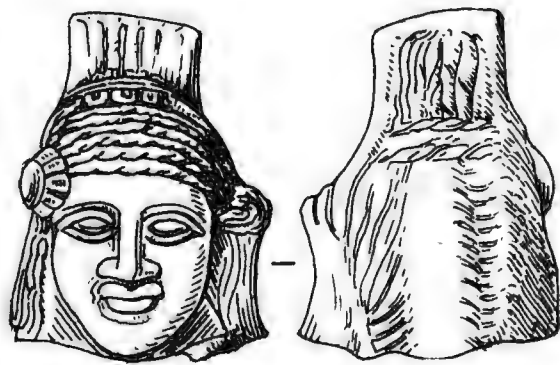
1. Face of a male figurine, curly hair arranged lining the forehead, wide open eyes, large pupils, blunt nose, parted lips, rounded chin. Curly hair shows Graeco-Roman influence (Reg. No. 6128).
2. Face of a male figurine, similar to no. 1, showing Graeco-Roman features (Reg. No. 5671).
3. Face of a male figurine, similar to no. 1, showing Graeco-Roman features (Reg. No. 5671).
4. Face of a male, grotesque feature, large prominent eyes, deeply cut thick lips showing parting; flat, broad nose; solid, coarse and micaceous texture (Reg. No. 12753).
5. Face of a female, may be a deity; hair arranged lining the forehead; sharp straight nose with well marked nostrils; large eyes with eyelids and eyebrows and a *tilak* on the forehead; solid and coarse fabric (Reg. No. 10716).
6. Face of a male, grotesque feature; large eyes; broad and flat nose, backside flat, thick lips parted; micaceous medium texture (Reg. No. 10716).
7. Face of a female; locks of hair falling over the forehead adorned with a *lalatika*; sharp, straight nose; wide open large eyes, well marked eyelids (Reg. No. 2555).
8. Head of a male; facial features soft but abraded; wears a puffy Phrygian type of cap (Reg. No. 2662).
9. Head of a male; grotesque features; large eyes, lids and brows marked clearly; wears heavy *kundala* in the right earlobe; prominent nose; thick parted lips; chin is also marked; solid and micaceous fabric (Reg. No. 13603).

(Pl. 11.4; Fig. 11.4)

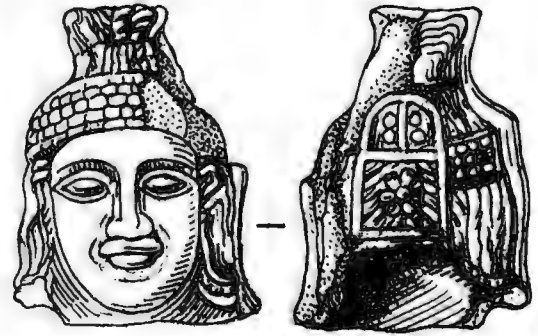
1. Head of a male; facial features qualitatively good but abraded; broad nose; thick lips; hair coiled up on the top of the head into a projecting knot, a turban tied over the forehead with a jewel setting on either sides (Reg. No. 8938).
2. Head of a female; broad nose, thick lips display smile; hair coiled up on the top, some hair let loose at the back; wears a three tiered pearl diadem, fastened by an oblong two tiered ornate buckle at the back of the head, bedecked with rosettes; traces of disc-like pearl earrings on left side (Reg. No. 9253).
3. Head of a male of kaolin; having usual facial features noted above; hair coiled and tied into a bun on the left fastened by a band of pearls on the forehead, arrangement at the back is of alternate strands of hairs and pearl strings bound intermittently by single or double stranded strings (Reg. No. 10203).
4. Head of a female; having usual facial features; wears an ornamental headgear having a broad forehead band bedecked with a crest on the left and a fan shaped projection on the top of the head, embellished with pearl strings,



Pl. 11.4 : Moulded human figurines



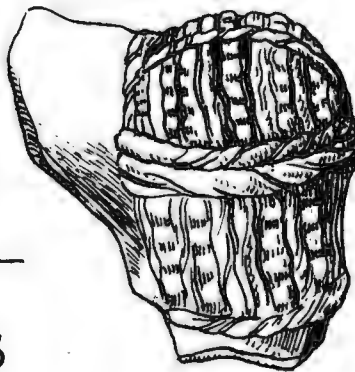
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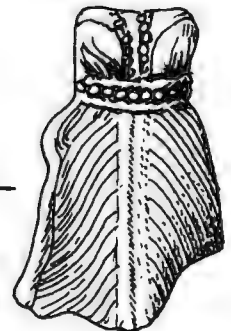
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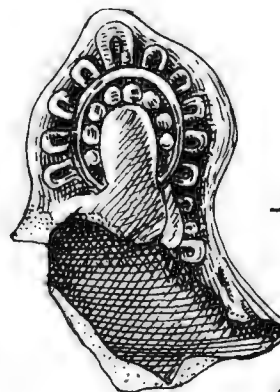
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Fig. 11.4 : Moulded human figurines

the middle one continues down to the forehead to suspend a *lalatika*, the loose hair at the back forms a leafy vein like appearance with the pearl strip being the central vein (Reg. No. 11394).

5. Head of a male, hair tied up into a knot, embellished with a diadem of triple pearl strings with a large jeweled crest on the left side and a knot on the right side at the back; hair arrangement at the back is similar to no. 3 noted above; sports floral, disc-like ear studs (Reg. No. 4983).
6. Upper portion of an elaborate headgear, ventral part shows beaded circle with a pending scarf in the centre which also looks like "a fan like frill"¹, while outer circle bears radiating grooves, resembling a *chakra*; part of dorsal in two segments, upper segment of fan-shaped while lower shows the details of the turban as intricate as pearl work (Reg. No. 1989). Such type of headgear is quite common in the figurines of Mathura and Gandhara region.

(Pl. 11.5; Fig. 11.5)

1. Face of a female; partially damaged; bulging eyes; prominent nose; thick lips; coiffeur form a bun over the forehead fastened at the base by a ribbon; a *chudamani* suspended by a beaded band on the forehead at the centre (Reg. No. 9700).
2. Bust of a male figurine; largely abraded; hair loose; wears a small necklace having a cowrie shaped amulet; straight nose (Reg. No. 5975).
3. Face of a male figurine; relatively abraded with bold facial features; straight nose; parted lips; bold eyes;

hair tied to a bun, a *lalatika* resting on the forehead (Reg. No. 9733).

4. Face of a female; snub nose; thick lips with displaying smile; hair tied to a small bun, falling free at the back, bedecked by a *chudamani*, held by three beaded strings; a decorated strip sticking between the left eye and ear; a *kanthahara* with an amulet partially seen sticking to the neck (Reg. No. 3066).
5. Kaolin terracotta, face of a *Yaksha*; hair arranged into coils and held by rosette fillet; grotesque features; wide and puffy nose, jeering countenance; wearing coiled earring; parted lips with exposed teeth comparable to the expression on the face of *Yaksha* from Pitalkhora "full of wild joy resulting in a chuckle which exposes the teeth"² (Reg. No. 2210).
6. Face of a female; right portion of the face is damaged; prominent nose, left eye bold; curved upper lip and lower one thick and drooping; hair coiled up like a bun, locks falling elegantly over the forehead, in the centre of which a rosette like jewel is set (Regd. No. 9387).
7. Face of a male; left portion partly damaged; prominent nose; bold eyes; pronounced eyebrows; curved upper lips, lower one thick and drooping; simple knot of hair at the top, fastened by a five tiered turban, tied to a knot on the right side, devoid of any ornamentation (Reg. No. 13112).
8. Face of a female; sublime delineation of facial expression; hair parted in the centre embellished with a jewel; left ear adorns an ornament; micaceous texture (Reg. No. 9704).

1. S.C. Kala, *Terracotta Figurines from Kausambi: Mainly in the Collection of the Municipal Museum, Allahabad*, Allahabad, 1950, p. 67, pl. XXXII-3.

2. M.N. Deshpande, *The Rock-Cut Caves of Pitalkhora in the Deccan*, *AI*, 15, 1959, p. 81, pl. LVI.



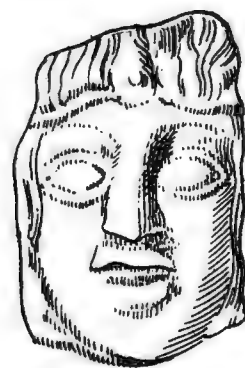
Pl. 11.5 : Moulded human figurines



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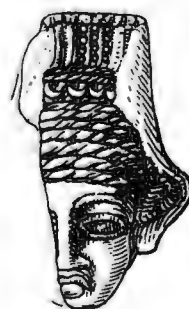
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Fig. 11.5 : Moulded human figurines

9. Face of a female; pensive facial expressions; closed eyes; prominent eyebrows and nose; partially parted thick lips; well-fed face; hair parted in the centre, partially covering forehead, a jewel in the centre of the forehead (Reg. No. 7569).
10. Face of a male with left portion of shoulder; broad nose; bold eyes and pronounced eyebrows; thick lips; elongated face; wearing an ornamental headgear with a broad forehead band tied into a knot on the left and a tuft at the top, embellished with pearl strings; traces of a beaded necklace on left shoulder; bejewelled ear ornament seen in the drooping earlobes (Reg. No. 2845).
11. Face of a female; hair tied to a low bun depicting typical Satavahana type of hairdo, in the centre a jewel is bedecked in a floral setting, fastened by two pearl bands over the forehead; the left band embellished with another jewel (Reg. No. 13555).
12. Face of a male; right portion damaged; prominent nose; bold eyes; pronounced eyebrows; damaged lips; simple knot of hair at the top, fastened by a five tiered turban, tied to a knot on the left side (Reg. No. 3974).

(Pl. 11.6; Fig. 11.6)

1. Figurine of a mother goddess; standing both arms raised up; profusely ornamented; hair neatly combed and done into a braid at the back, bedecked by ornaments (*praveni*); wears a fan shaped headgear having two bosses resting on the temples and has a pearl band placed over the parting (*simanta*); wears three necklaces, one short *ekavali*, another longer *kanthi* with a central pendant and a still longer one of two strings of beads having jeweled leaf shaped pendants; pendulous breasts show nipple mark on the right side; naval marked on lower garments; wears a three pearl stringed *mekhala*, genitals clearly marked, wears armlets comprising of pearl bands, a set of four bangles, wristlets, identical to the armlet; holds a lotus in right hand; stumpy legs; anklet on the right foot extant, left damaged, sole of the foot modelled flat with a view to keep the image erect¹ (Reg. No. 8972).
2. Figurine of a mother goddess sited in *pralambhapada* posture, found detached from the rear view of the image; right leg damaged; elaborate hairdo parted in the centre and puffed on either side, further tied by a hair bun, bedecked with jewel in the centre, elaborate *karna kundalas* with a central jewel, pearl tassels suspended over the shoulders, wears a beaded *kanthahara* with a central pendant and a long *ekavali* with a jewel between the heavy breasts; elaborate rosette, armlet with pearl tassels; right hand seen below the breasts possibly holding some attribute, left hand perhaps holding stalk of a flower; bangles four in number in both hands; below naval a three stringed pearl *mekhala*; stumpy left leg bedecked with anklet having rosette pattern (Reg. No. 4822).
3. Figurine of a *chamardharini* (fly whisk carrier); right hand seen

1. Another example of similar type showing back portion of the mother goddess has been reported at the site bearing Reg. No. 12334, inadvertently not illustrated in the report.



Pl. 11.6 : Moulded human figurines

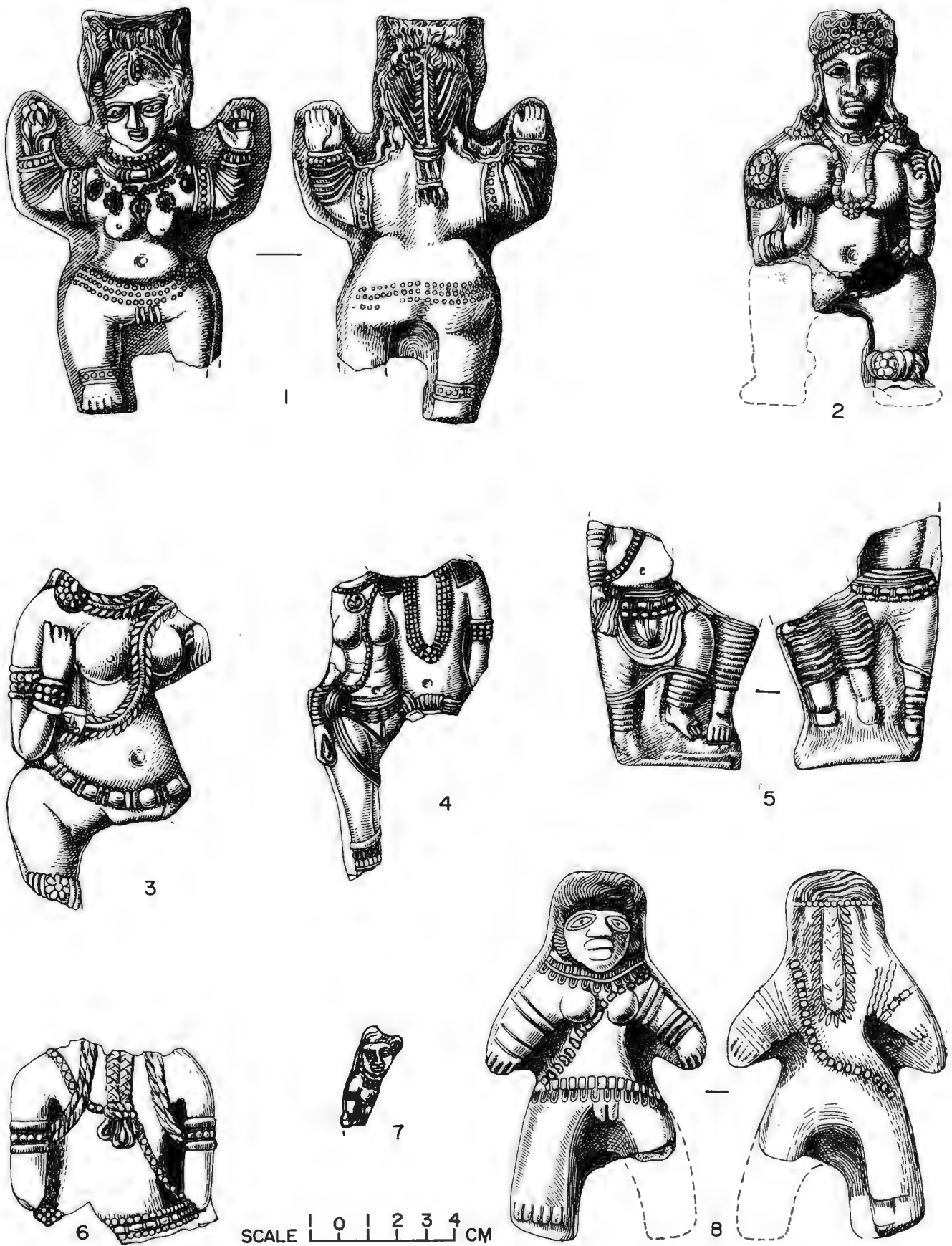


Fig. 11.6 : Moulded human figurines

placed on the side of corresponding breasts while left largely damaged, holds a fly whisk; adorns thick necklace and *upavita* across left shoulder; armlet, bangles and girdle of collared barrel shaped beads and anklets; portions above neck, left shoulder, abdomen and leg missing besides right sole of the feet (Reg. No. 8743).

4. Figurine of a *mithuna* couple, very well composed showing the male on the left side and holds his counterpart with his right hand kept over her corresponding thigh, heavily adorned couple wear necklace, pearl tassels, *ekavali*, armlets, bangles, *mekhala* and anklets, upper part of the body bare while lower part draped in dhoti and sari, over the sari a sash is tied to the right waist and suspended across the legs; portions above neck, either ends of the body part of the couple, complete lower portion of the male counterpart and the lower left portion of the female counterpart, damaged (Reg. No. 4797).

5. Figurine of a *dampati*, as the female counterpart is seen on the left side of the male. Apparently the composition is treated like a plaque wherein majestically drawn male counterpart seen pressing the right leg of the counterpart with his left leg slightly bent, perhaps resembling some rituals related to marriage ceremony, heavily adorned couple wear necklace, *ekavali*, armlets, bangles, *mekhala* and anklets, the male counterparts a dhoti tied with a *kamarabandha* and a sash is shown over the dhoti suspended across the legs;

right leg of the female counterpart seen draped in sari; portions above bust of male counterpart and above knee of female counterpart damaged (Reg. No. 2934).

6. Back portion of a torso of a male figurine; rest damaged; elegantly adorned with a pearl necklace, *upavita*, three stringed *mekhala* and beaded armlets; a sash overhangs at either side of the shoulders suggesting *channavira*-like straps running across the front part of the body; such type of adoration is normally seen in majestic depictions; the braid (*veni*) suspended at the back is adorned with ornaments (Reg. No. 7189).

7. Figurine of a female; left portion damaged; wears short necklace of two pearl strings; hands seem to have been folded below the breasts, wearing bangles and armlets (Reg. No. 9489).

8. Figurine of a mother goddess; grotesque facial features; stumpy limbs; left leg damaged; hair rolled up into a low bun and let loose at the back, at the base of the bun is a *kesantarekha*, a pearl band with a crest jewel on the forehead, wears a short *kanthi*, a long pearl *ekavali*, armlets, *mekhala* and anklets; genital part is drawn clearly (Reg. No. 6104).

(Pl. 11.7; Fig. 11.7)

1. Middle portion of a female figurine; wears two necklaces, one sticking to the neck and the other below it; between the breasts runs an *upavita*; pearl tassels of the damaged earrings on the right shoulder, simple



Pl. 11.7 : Moulded human figurines

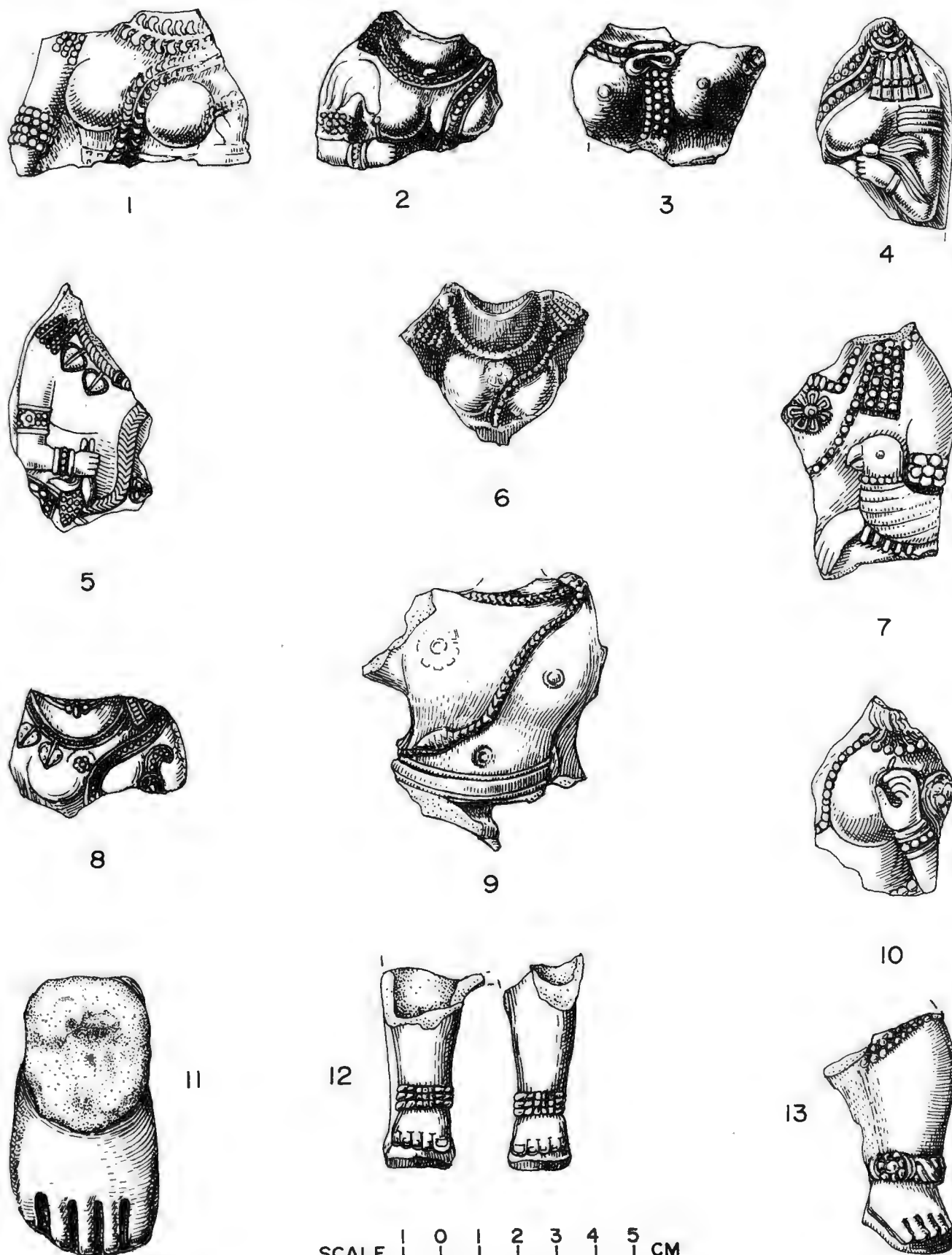


Fig. 11.7 : Moulded human figurines

armlets consisting of stance of bead (Reg. No. 6529).

2. Middle portion of a *chamardharini* carrying a fly whisk in her right hand, held below the corresponding breast; wears necklaces and *upavita* across the breasts, armlet and bangles of beaded strings (Reg. No. 9849).
3. Middle portion of a female figurine; wears a small necklace comprising of amulet from where triple pearl strings seen suspended; breasts are marked with nipples (Reg. No. 9470).
4. Middle portion of a *chamardharini*, holding a fly whisk in her right hand; wears couple of necklaces, bedecked with strings of pearls; elaborate ear ornaments having long pearl tassels, simple armlet and wristlet (Reg. No. 2963).
5. Right middle portion of a female figurine holding a bunch of mangos¹ in her right hand held against her corresponding side of abdomen; wears a thick torque attached with leaf shaped pendants seen on either side of the central amulet, besides pearl tassels, *upavita*, armlets, wristlets and *mekhala* (Reg. No. 5033).
6. Middle portion of a female figurine; wears a couple of necklaces of strings, pearl tassels and *upavita* (Reg. No. 1630).
7. Left middle portion of a female figurine; a parrot is seen perched over her left hand; wears two necklaces, the shorter one is a

single string of pearls with a lotus medallion and the longer one is a single string of pearls; ear stud with pearl tassels on the left shoulder; stringed armlet and wristlets (Reg. No. 7190).

8. Middle portion of a female figurine; wears a couple of necklaces of strings, collared pendant, pearl tassels and *upavita*, *keyura* (armlet); breasts marked with nipple (Reg. No. 8738).
9. Middle portion of a male figurine; wears one short and one long torque, the later worn in the manner of an *upavita*, *kamarabanda* tied over the dhoti; well marked nipples and naval (Reg. No. 1895).
10. Left middle portion of a female figurine; holding a stalk of a full blown flower in her left hand; wears a necklace of pearls, pendants, *upavita*, pearl bangles (Reg. No. 7450).
11. Portion of a foot below ankle; having well marked toes and nails (Reg. No. 6321).
12. A couple of right and left portions of legs below knee of mother goddess; feet and toes well marked; wear anklets comprising of trinkets fastened by beaded bands (Reg. No. 4796). Both these specimens have been recovered from the deposit of a draw well suggesting their possible emersion after performance of certain rituals. This indicates age-old continuing traditions of emersion of divinity after worship².

1. Female figurine holding a bunch of mangos has also been reported from Kausambi; S.C. Kala, *op. cit.*, p. 65, pl. XXV - A.

2. The excavations at Sringaverapura have recorded a number of terracotta human figurines found in the deposit of the tank suggesting the age-old practice of emersion of divinity in the water body; for further details see B.B. Lal, *Excavations at Sringaverapura (1977-86)*, MASI 88, 1993, pp. 108-143.

13. Suspended portion of a left leg of a mother goddess; traces of a beaded girdle at the upper portion, anklets with central rosette motif, well marked toes (Reg. No. 2923).

D. ANIMAL FIGURINES

In sharp contrast to the medium to fine fabric of human figurines, the excavations have yielded animal figurines largely of coarse variety made out of locally available micaceous clay with some examples of medium to fine clay. Both handmade and moulded varieties have been recorded. Artists have paid all care in showing the characteristic features of various animals such as dewlaps and humps in case of cattle, tusks in case of elephants, curled and pointed horns in case of sheep and manes in case of horses. The horses are depicted caparisoned and sometimes saddled. The repertoire of animal figurines includes a plaque fragment showing a *hastipaka* (elephant rider) (Reg. No. 11395). There is another plaque depicting a *asvapala* (horse rider) striding to the right within an oval frame. Without any exception the majority of the Satavahana horses in terracotta are casts from double moulds. Several such types have been reported from the Satavahana horizons of Deccan where they are known standing motionless. Invariably, with or without rider, shown caparisoned with all necessary trappings and horse-bits, gives an impression of *hors de combat*. Some of horses appear to be ceremonially harnessed for the *Ashvamedha yagna*¹ (Reg. No. 4823).

The site has registered a couple of terracotta figurines of cow showing well modelled portions of

udders (Reg. No. 6217 and 7430). Occurrence of such examples is generally rare from an excavated site.

Likewise, occurrence of figurine of tortoise is also a rare phenomenon (Reg. No. 7071). Tortoise is regarded as one of the incarnations of Lord Vishnu, besides, the *vahana* of river goddess Yamuna and as *lanchna* of the *Tirthankaras*. Tortoise shaped amulets have been reported from a number of sites such as Prakash, Ter, Nevasa etc. which symbolizes longevity to those who adorn it. A specimen of tortoise in copper has been reported in a Megalithic context at Raipur Hingna near Nagpur².

A couple of figurines which should have figured in the category of pendants, inadvertently, have figured here such as Nandi (Reg. No. 6095) bearing perforation along the longer axis of the base, an elephant (Reg. No. 8309) bearing perforation across the body and a bird (Reg. No. 6154) bearing two perforations serving the purpose of spacer bead.

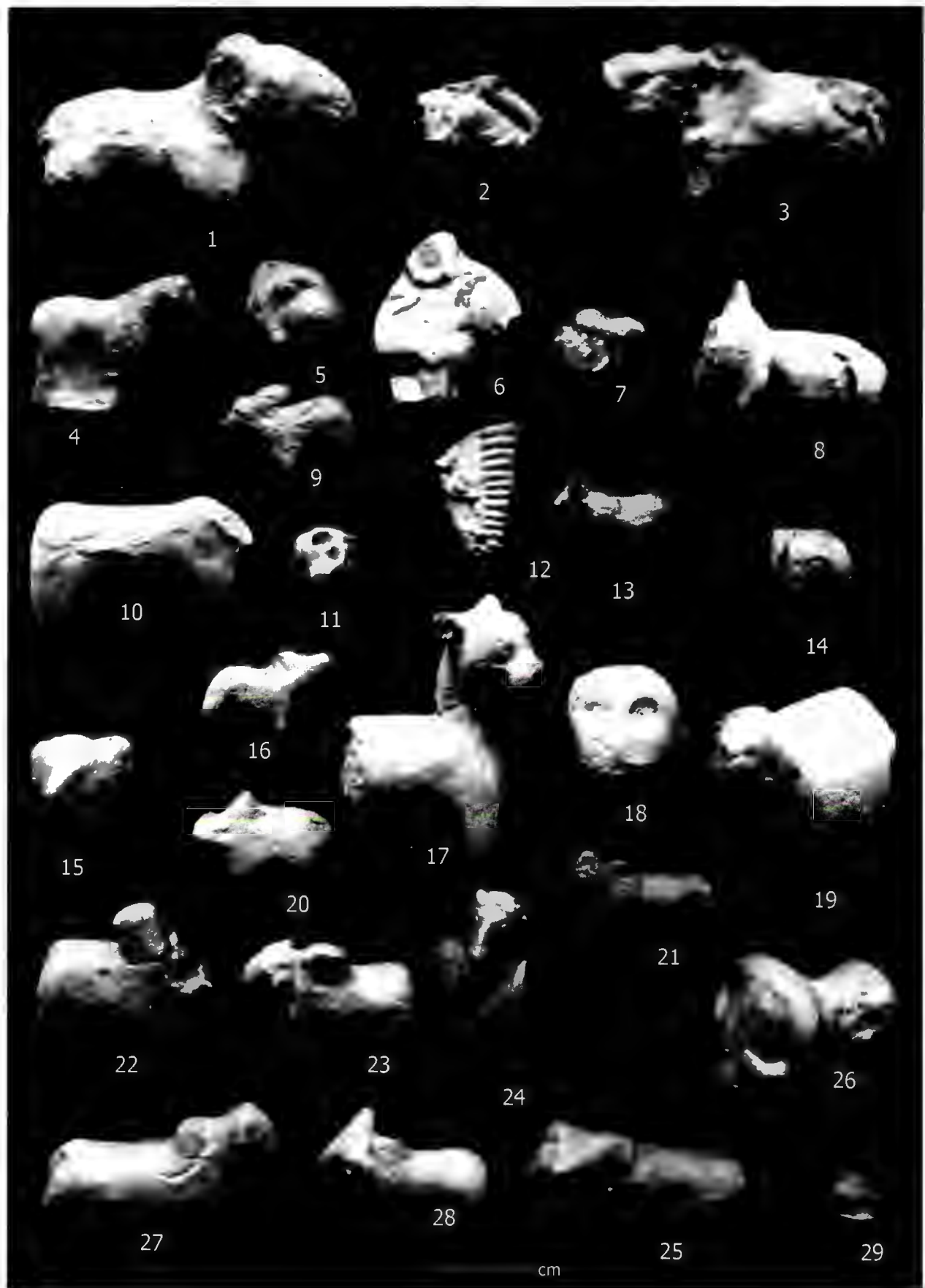
Some of the selected specimens are described below:

(Pl. 11.8; Fig. 11.8)

1. Fragmentary elephant figure; moderately hand modelled; dull red colour bearing red slip; ears, trunk, legs broken (Reg. No. 6567).
2. Forepart of head of a fairly well-modelled elephant figure with upraised trunk holding vegetal material, protruding tusks; eyes outlined in low relief (Reg. No. 6937).

1. K.V. Soundrarajan, *Nagarjunakonda (1954-60)*, vol. II (*The Historical Period*), MASI 75, New Delhi, 2006, p. 363, pl. CXXII - A & B.

2. S.B. Deo, *Indian Beads: A Cultural and Technological Study*, Pune, 2000, p. 87.



PI. 11.8 : Terracotta animal figurines

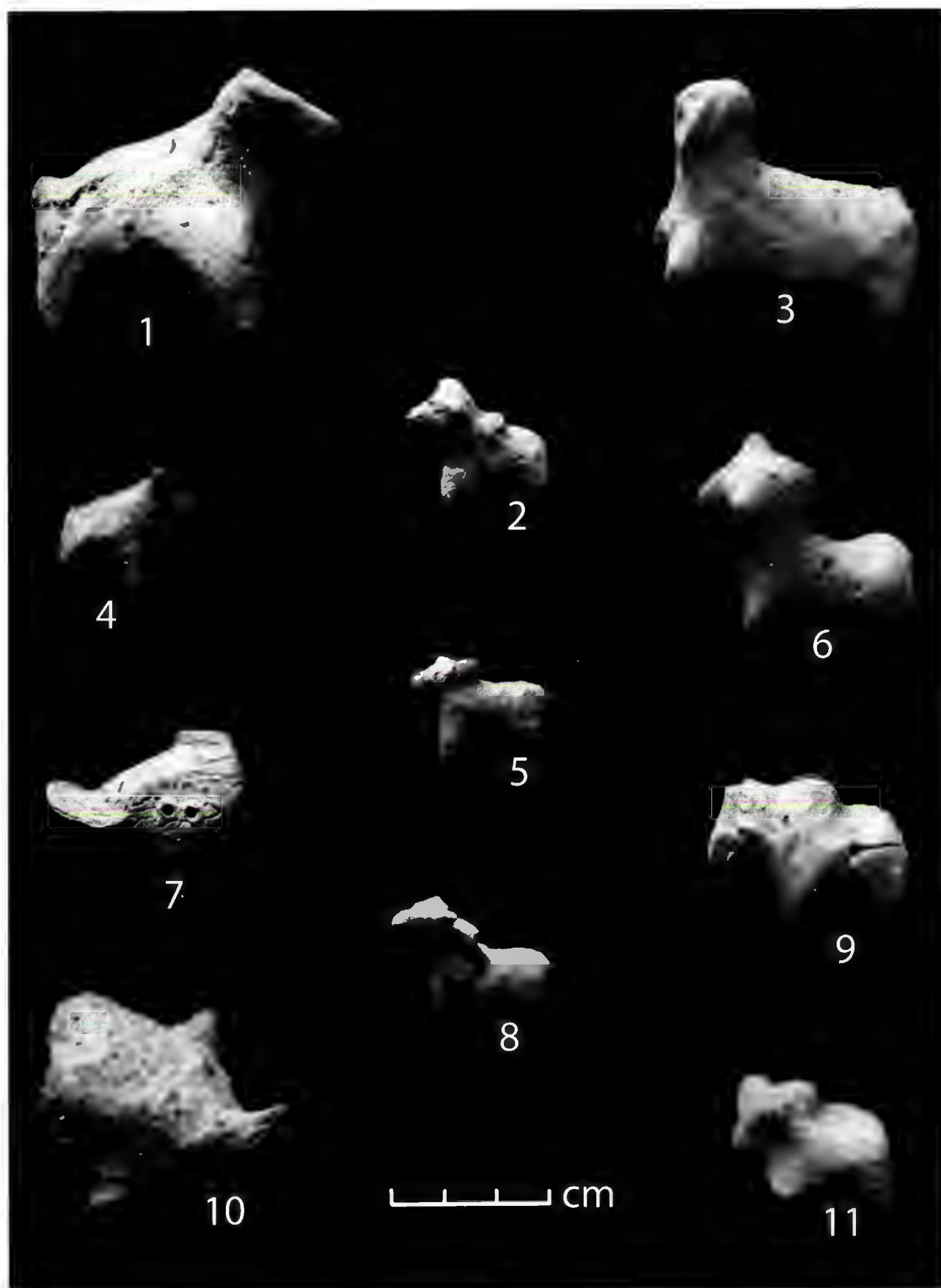


Fig. 11.8 : Terracotta animal figurines

3. Fragmentary elephant figure; crudely hand modelled with upraised trunk; an applied tail turned to right, stumpy forelegs (Reg. No. 8255).
4. Moderately modelled horse figure standing over a pedestal; used as rattle; a faint trace of a garland around the neck (Reg. No. 9850).
5. Forepart of a buffalo figure, snouted mouth is demarcated by a slit, twisted horns showing groove marks (Reg. No. 9053).
6. Fragmentary plaque depicting elephant figure with two riders; well modelled (Reg. No. 11395).
7. Crouching Nandi figure, moderately modelled; bear a perforation below the hump, forepart of the Nandi is damaged (Reg. No. 10038).
8. Fragmentary elephant figure; moderately hand modelled; tapped ears, trunk, legs broken, dull red colour bearing traces of slip (Reg. No. 7883).
9. Bull figure; well hand modelled; with prominent hump and stumpy joined legs, body bear traces of incision (Reg. No. 9965).
10. Animal figure, probably bull; portion above neck damaged; broom like treated appliqué tail turned to right and sticks to the body (Reg. No. 11572).
11. Head of a tiger figure; face, neck and portion of eyes are well marked by pinching; growling countenance (Regd. No. 8719).
12. Fragmentary elephant figure; well modelled showing part of grooved trunk holding a lotus; lower tip bears perforation for threading (Reg. No. 1987).
13. Figurine of a cow showing well marked portions of udders; forelegs are longer than the hind (Reg. No. 6217).
14. Elephant figure; seated over a pedestal base with a perforation across the body (Reg. No. 8309).
15. Forepart of a fairly well modelled sheep figure; showing twisted horn (Reg. No. 12541).
16. Figurine of a bull; moderately hand modelled with pronounced hump; snouted mouth showing nostrils, short stumpy legs (Reg. No. 3003).
17. Forepart of a of lioness figure; fairly well hand modelled; prominently marked ears, head turned to right, open mouth indicating growling mode; hind portion damaged (Reg. No. 11267).
18. Face of an animal figure of cat family; eyes marked by depression and mouth by a slit (Reg. No. 12254).
19. Sheep headed pot luted to a wheel turned voluminous body with a perforation; prominent horn; micaceous red fabric bearing thick coarse section (Reg. No. 11935).
20. Figurine of a bull; hand modelled; prominently marked hump with applied tail and undefined legs (Reg. No. 10802).
21. Figurine of a bull with perforation in forelegs and blind hole over the forehead; hand modelled (Reg. No. 7867).

22. Figurine of a bull; hand modelled; prominent hump and undefined stumpy legs, blind perforation on right hind leg (Reg. No. 7228).
23. Figurine of a bull; hand modelled; prominent hump, mouth marked by a slit; eyes and nostrils bear piercing mark; well marked dewlap (Reg. No. 1467).
24. Figurine of a crouching Nandi; hand modelled; well marked ears, horns; incised eyes and nostrils; limbs damaged (Reg. No. 8986).
25. Figurine of a bull with perforated legs fused together (Reg. No. 7698).
26. Figurine of a sheep showing portions of head and neck; drooping horns with curved ends; eyes, nostrils pierced; handmade, roughly finished (Reg. No. 7694).
27. Figurine of a bull; well marked hump; horns damaged; stumpy legs perforated; hand modelled (Reg. No. 4065).
28. Figurine of a bull; prominent hump, punctured eyes and snout pierced; dewlap modelled realistically; four rows of three dots pierced on the forehead suggests some religious purport (Reg. No. 3342).
29. Highly adorned figurine of a crouching Nandi over a beaded base perforated across the longer axis; possibly worn as amulet (Reg. No. 6095).
1. Figurine of a dog; roughly modelled; fore and hind legs of left side are damaged (Reg. No. 6774).
2. Figurine of a bull; roughly modelled; hind legs damaged; coarse fabric (Reg. No. 9173).
3. Figurine of a dog; elongated body with stumpy legs; head turned to left (Reg. No. 2738).
4. Figurine of a cow with well marked udders; moderately hand modelled (Reg. No. 7430).
5. Figurine of a bull with prominent hump and well marked eyes, front leg and part of tail damaged (Reg. No. 8205).
6. Figurine of a sheep with well marked incurved horns; stumpy legs; hind legs damaged; hand modelled (Reg. No. 7162).
7. Figurine of a highly ornate bird bearing incised decorations with two perforations across the central part of the body possibly served as spacer bead or amulet (Reg. No. 6154).
8. Figurine of a bull showing pronounced hump, horns, tail and dewlap; hand modelled (Reg. No. 2299).
9. Figurine of a bull looking down; left hind leg damaged; hump relatively prominent; poorly hand modelled (Reg. No. 6788).
10. Figurine of a tortoise; face turned to left side; poorly hand modelled (Reg. No. 7071).
11. Figurine of a bull; inaptly hand modelled; pronounced horns and humps; stumpy legs; forelegs damaged (Reg. No. 1595).

(Pl. 11.9; Fig. 11.9)



Pl. 11.9 : Terracotta animal figurines except sl. no. 7 of a bird

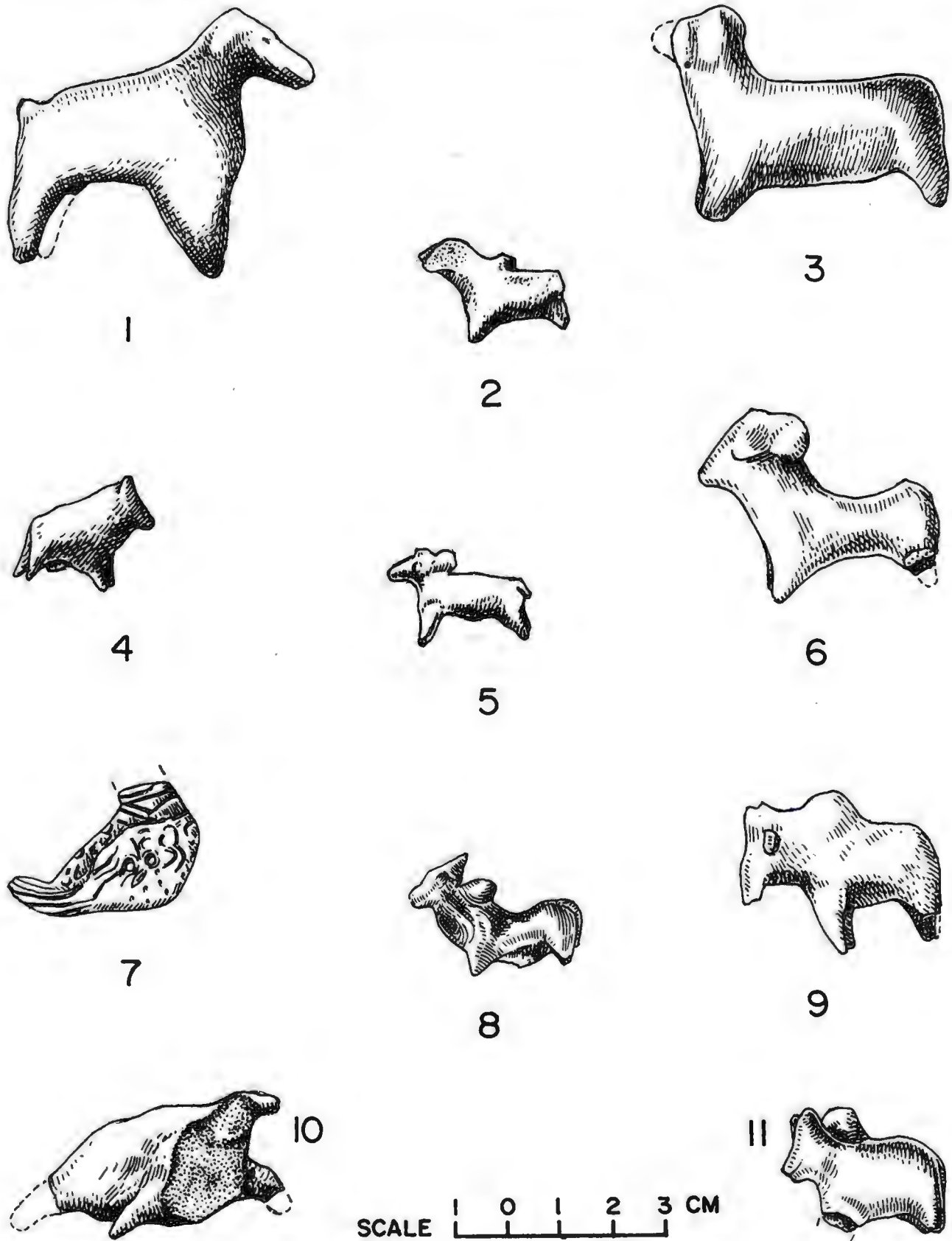
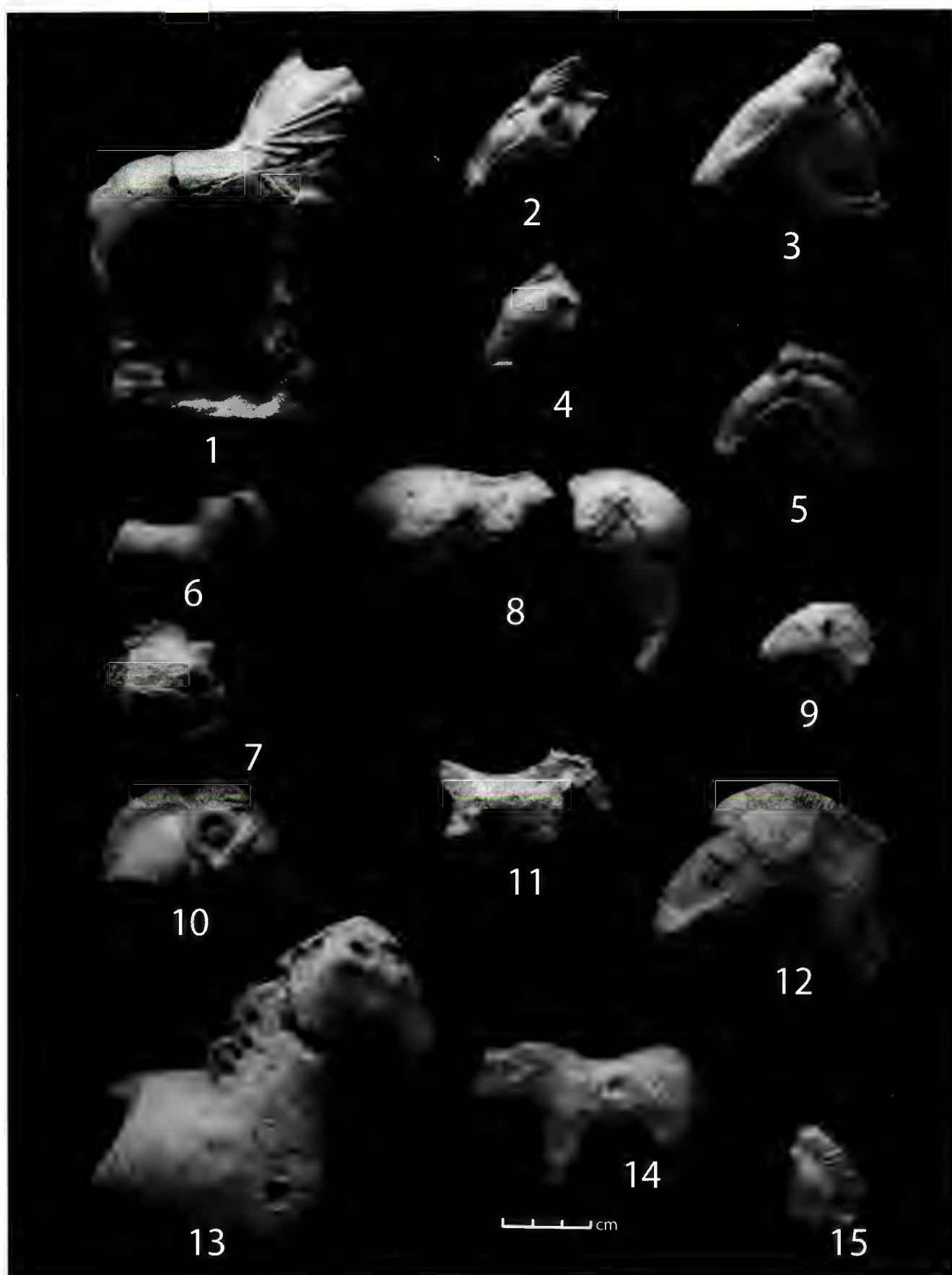


Fig. 11.9 : Terracotta animal figurines except sl. no. 7 of a bird

(Pl. 11.10; Fig. 11.10)

1. Figurine of a horse standing on a flat base, caparisoned having a garland and reins of beaded strings with rosettes, which turns and goes down; rings on right foreleg (Reg. No. 4823).
2. Figurine of a horse, head portion having an elaborate bridle, simple reins consist of double straps, whisk at the top of the mane, eyes, ears well marked (Reg. No. 10557).
3. Figurine of a horse, head portion fully harnessed, bridle consisting of triple beaded strings, interposed by rosettes and a beaded rein, fly whisk at the top of the head clearly marked (Reg. No. 1558).
4. Figurine of a pig, left part head portion showing snout with projected canine, ear and eyes are clearly marked (Reg. No. 1517).
5. Figurine of a horse, head and neck part showing simple rein fastened by a roundel, consist of double straps, mane well arranged, flaked by two bosses (Reg. No. 2429).
6. Figurine of a bull with perforations in parts of fore and hind legs indicating its function as wheeled toy, hand modelled (Reg. No. 5738).
7. Figurine of a horse, caparisoned head, and bridle strap is of incised band, prominently marked ears, mane, nostrils and eyes (Reg. No. 89047).
8. Figurine of a horse (obverse and reverse views), hind portion fully caparisoned and saddled showing lattice motif, elements of harnessing show corded strings bedecked with rosettes at intervals (Reg. No. 3306).
9. Figurine of a pony, devoid of bridle or decorative elements, under developed mane, well marked eyes, ears and nostrils, mouth is partially open, hand modelled (Reg. No. 3475).
10. Figurine of a horse, head portion, right side, bridle simple comprising plain double strap, prominently marked eye and ear, mane well arranged, muzzle broken off (Reg. No. 2156).
11. Figurine of a horse, free from ornamentation, mane has been treated with serrated features, hand modelled (Reg. No. 6429).
12. Figurine of a horse, head portion, reins consisting of single strap, mane well marked by lines, a central crest suspended over the forehead with distinctly marked eyes and eyebrows, well marked snout, wears a garland, traces of a rope strap for holding the saddle (Reg. No. 6578).
13. Figurine of a horse, front portion free from ornamentation with prominent mane, eyes and ears; fore portion below the body is rounded bearing a perforation indicating its function as wheeled toy (Reg. No. 4855).
14. Figurine of a horse showing a perforation across nostril, well marked tail, hand modelled (Reg. No. 11936).
15. Figurine of a horse, mane and reins partly seen (Reg. No. 2421).



Pl. 11.10 : Terracotta animal figurines

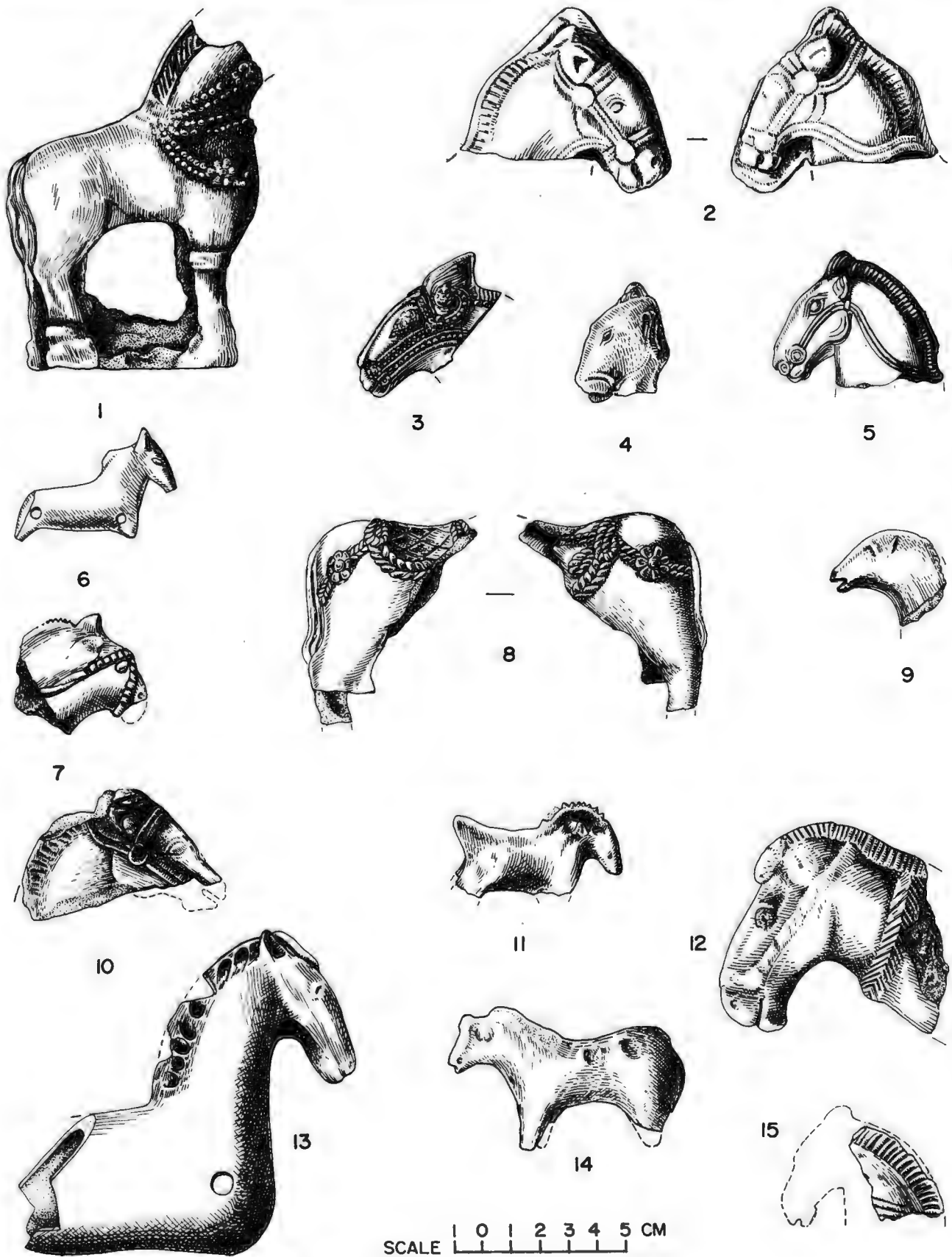


Fig. 11.10 : Terracotta animal figurines

E. HORSE RIDER (Pl. 11.11)

In addition to above, there is a terracotta plaque of oval shape depicting an *asvapala* (horse rider) marching to the right, within a frame of corresponding shape. As per the *Vishnudharmottara* (III, xliii, 38) the *asvapala* should wear *Udichyaveshas* = *tu kartavyas* = *turaganam tu sadinah* (the northern dress). Here, the horse is in sunken relief, in all exuberance, has been conceived with rare majestic features, with a somewhat alien physiognomy. It has achieved the supple rhythmic and masculine vigour of the unbridled horse without sacrificing any aesthetic value. The agitated mane with deep oblique incisions and the stimulated legs together suggest some kind of dexterous movement of the horse. Incidentally, the description of the horse compares with the one described in the *Harshacharita* by Banabhatta i.e. *Yupanupurvivakrayatodagra-griva*. This type of horse may be identified with the Kamboja (ancient Pamir) horse. Further the voluminous treatment of the horse suggests a special variety of steed inferred as *mahavaji* and *brihadasva* in the *Harshacharita* of Banabhatta¹.

The lanky but nimble looking rider is holding the reins and bent forward and partially compressed within the frame of the plaque. The turban-like head-gear with a protuberance in the centre and *patra-kundala* are some of the facial details that attract attention. In fact the overall portrayal of the rider does not seem to belong stylistically to the Satavahana terracotta art. Nevertheless, the theme represented on the plaque is indicative of either some extra-mundane narrative or secular game.

1. V.S. Agrawala, *Terracotta Figurines from Ahichchhatra*, District Bareilly, U.P. *AI*, 4, 1947-48, p. 153.

F. MISCELLANEOUS FINDS

Apart from human and animal figurines, the site has reported a variety of terracotta objects of different utility and function. Such types of terracotta objects have been reported from other sites of comparable nature. Their shapes and size, technique of manufacture depend on the function of the object. A set of objects with a featureless flat rim having rounded profile have been identified as head scratcher in majority of excavation reports dedicated to the early Historical period. Externally the surface of the bowl-like object is smooth due to constant handling which incidentally tallies with the sound box of modern day's *ektara*, a string instrument of incipient type played by village folk. It consists of a terracotta bowl to which a bamboo strip is inserted or tied and a wire string tied across the strip end and to the bowl end. The mouth of the bowl is fasten with some parchment-like substance in order to produce sound. Over this cover, a tounge-like strip with serrated end is placed to hold the string tightly, so as to play the string with index finger. One such specimen bear stamped Brahmi legend (Reg. No. 4857) and other graffiti of a rowing boat (Reg. No. 8595).

(i) PLAYTHINGS

The excavations have yielded a few objects which could be assigned to the category of playthings or items of pastime which include models of toy-like objects such as legged querns, and other kitchen ware items.

Illustrated here are nine specimens out of which Sl. No. 1, 2 and 4 are of shale stone while rest terracotta. Shale objects are hopscotch-like, bearing two or four

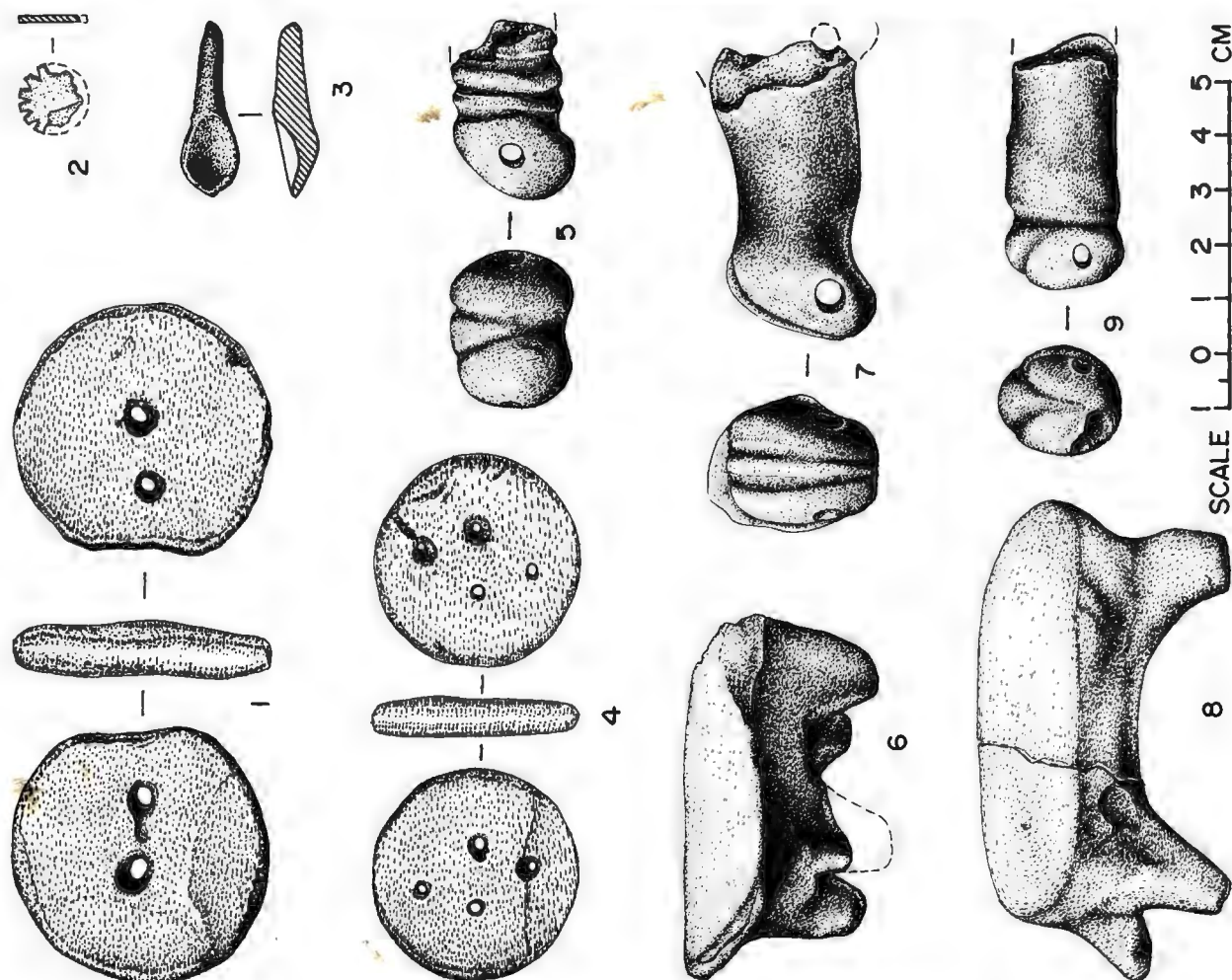


Fig. 11.11 : Play things: Shale stone sl. no. 1, 2 and 4; terracotta sl. no. 3, 5-9



Pl. 11.11 : Terracotta plaque depicting a horse rider

perforations. The disc with two holes is presently seen used as a play item in which a string is allowed to run across the two holes and the loose ends held in either hands. The disc is rotated with the help of a string held in both the hands and subsequently stretched alternately which results in vigorous rotation of the disc with a hiss sound (Reg. No. 2234). The other possibility of the use of disc with two or four holes could be as string separator in spinning or any other industrial activities. The disc bearing more than one hole might have been used as spindle by inserting split sticks for spinning fine fabric such as cotton. A separate section is devoted in this report on the spindle-whorls (see Pl. 11.15, Fig. 11.14).

(Fig. 11.11)

1. Disc dressed out of shale stone with two holes (Reg. No. 2234).
2. Disc with serrated end dressed out of shale stone (Reg. No. 8193).
3. Terracotta model of a ladle, (Reg. No. 2108).
4. Disc dressed out of shale stone with four holes possibly used as spool (Reg. No. 6066).
5. Hind portion of a terracotta animal figurine with two holes across the grooved body indicating its function as wheeled toy (Reg. No. 1752).
6. Terracotta model of a legged quern of rectangular shape (Reg. No. 9057).
7. Hind portion of a terracotta animal figurine with two holes, one across the lower hind portion of the body and other forepart of the body,

indicating its function as wheeled toy (Reg. No. 2627).

8. Terracotta model of a legged quern of elliptical shape (Reg. No. 11223).
9. Back and hind portion of a terracotta animal figurine with a perforation across the hind portion indicating its function as wheeled toy (Reg. No. 2935).

(ii) CRUCIBLES

Crucibles fall in the category of refractory ceramic vessels and are closely associated with the sites of primary production locations. Apparently, the present site is one such industrial centre from where a good number of such vessels have been recovered.

Terracotta crucibles have been reported from a number of early Historic sites like Kausambi, Sonpur, Atranjikhara, Satanikota, Narhan etc. Alchemical texts provide some details on the types of crucibles, for example, *karahatika* meant for *hataka* (gold), *raupyamusa* for silver and shapes like *golamusa* (spherical), *vrinntakamusa* (egg-plant), *manjusamusa* (box-like)¹.

Terracotta crucibles for melting raw material for extracting metal ingots for shaping various works of art have been reported in sizeable number from period II onwards which increases in number in period V. Such heat resistant containers are basically thick walled hand made receptacles, prepared out of ferruginous loam, showing fused metalliferous and glassy residue sticking to the surface. Earlier specimens have hand pressed exterior while the latter ones show relatively smooth exterior. The

1. Vijaya Jayant Deshpande, *Musavijnana* or the Ancient Science of Crucibles, *IJHS*, 31(4), 1966, pp. 359-363.

shapes met with are largely of cylindrical cups with concave neck, bulging sides and roundish base, besides a few squat cups with flat base and a couple of oval shaped miniature containers with flat base. The height ranges from 71 mm to 12 mm.

A couple of these have been reported from trench no. M14/3 (layer 12) has been registered together as Reg. No. 7399, belonging to sub-period III B. Similarly at least five damaged crucibles reported from a pit sealed by layer 3 in trench no. 07/1 bear common Reg. No. 5787, attributed to period V, located towards the inner slope of the rampart. Likewise, a few of the finds of period V have been reported from the cuttings of the moat. It appears from the above that the discarded crucibles were either dumped in the nearby pit close to the furnace area or thrown into the moat.

Extracting metal through these crucibles appears to be a craft activity of organized sector controlled by upper strata of the community. Apparently, some of these crucibles bear traces of greenish incrustations of copper froth suggesting their use by coppersmiths of period V. While a few of these might have been used for extracting or shaping other metals like gold, silver, lead or iron. Keeping in view the miniature receptacles currently used by traditional goldsmiths, it is assumed that a few of such receptacles (Reg. No. 8699) might have been remnants of goldsmith's atelier of the Satavahana times. Scientific analysis such as X-ray diffraction of these crucibles may give definite understanding of the technology and the metal extracted through these crucibles.

Together with these crucibles, the site has reported fused iron wastes

from sub-period III A, evidently not only supporting the introduction of iron at the site but also its technology dating back to *circa* 1400 BCE - 1100 BCE.

Illustrated here are twenty two best preserved specimens.

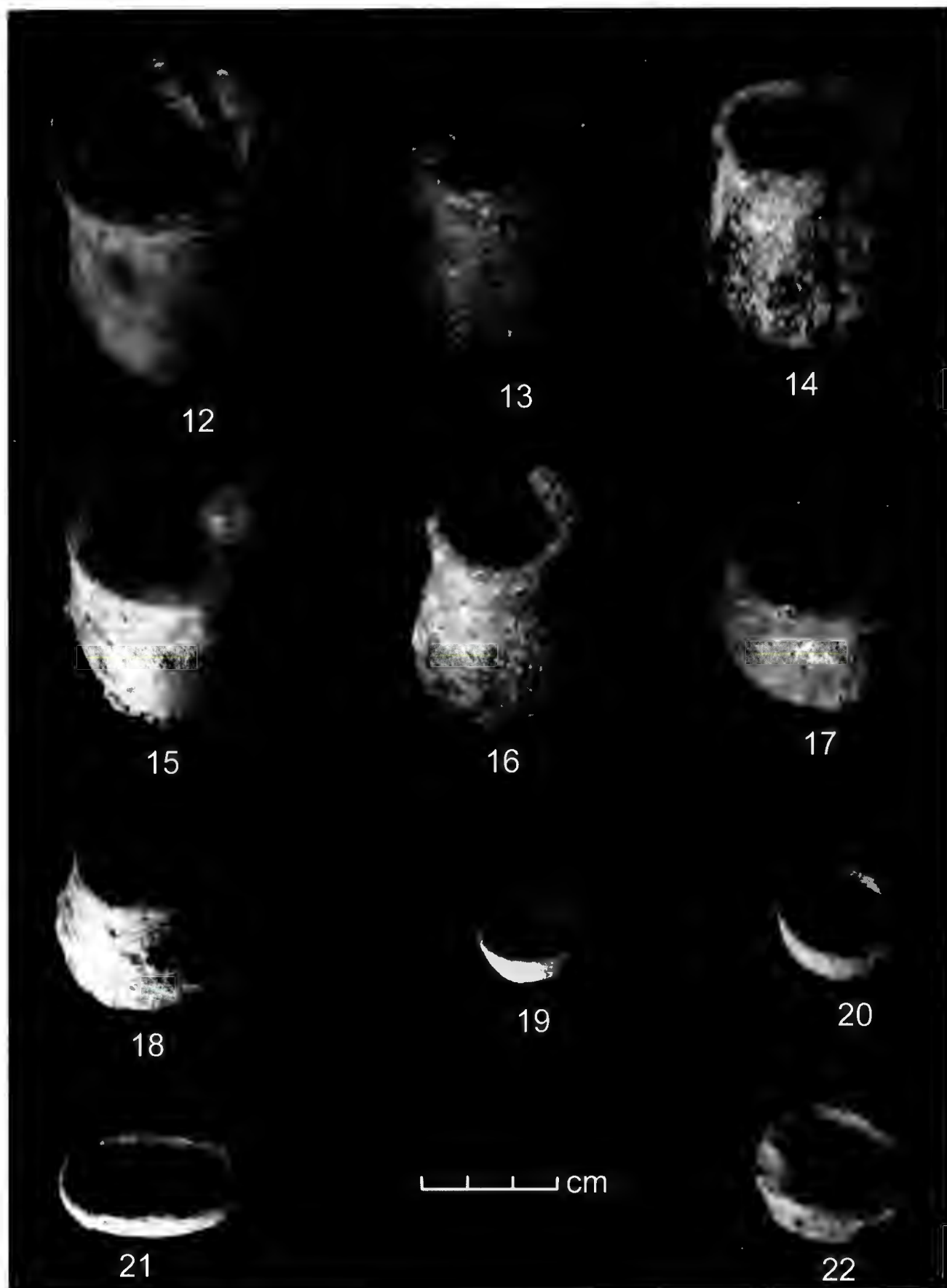
(Pl. 11.12, Pl. 11.13)

1. Bowl-shaped damaged crucible of smoky coffee red colour, incurved mouth showing featureless rim, uneven hand pressed bulging sides alternately ridged, roundish base. Interior bears patches of light yellowish incrustations. Size: Ht. 62 mm. Dia. 70 mm. (Reg. No. 1450). From an upper level of period II.
2. Bowl-shaped damaged crucible of grey colour, splayed out side, interior bears patches of green residue. Size: Ht. 71 mm. Dia. 91 mm. (Reg. No. 1388). From period V (Moat cutting).
3. Cup-shaped crucible of grey colour, upper surface flat, body cylindrical, base conical. Interior plain bearing white incrustations. Size: Ht. 60 mm. Dia. 44 mm. (Reg. No. 11898). From a mid level of period V.
4. Cup-shaped damaged crucible of grey colour, showing slightly out-turned featureless rim, concave neck, cylindrical body and rounded base. Interior showing marginal ridged effect bears whitish incrustations. Size: Ht. 64 mm. (Reg. No. 1389). From period V (Moat).
5. Cup-shaped crucible of dark grey colour, damaged rim showing hand pressed lipped



Pl. 11.12 : Crucibles

- formation, concave neck, cylindrical body, glassy residue sticking to rounded base. Size: Ht. 61 mm. Dia. 40 mm. (Reg. No. 11492). From an upper level of period V.
6. Miniature bowl-shaped damaged crucible of buff red colour, marginally incurved mouth showing uneven hand pressed profile, alternately ridged, base more flatish than roundish. Both interior and exterior bear whitish incrustations. Size: Ht. 25 mm. Dia. 45 mm. (Reg. No. 4781). From an upper level of period II.
 7. Miniature cylindrical cup-shaped damaged crucible of greyish red colour, hand pressed uneven profile, thick flat base. Size: Ht. 53 mm. Dia. 35 mm. (Reg. No. 1392). From an upper level of sub-period III A.
 8. Miniature bowl-shaped damaged crucible of red colour, hand pressed exterior, interior and exterior surface show whitish incrustations. Size: Ht. 19 mm. Dia. 56 mm (Reg. No. 1394). From an upper level of period II.
 9. Miniature cup-shaped crucible of grey colour, base conical. Size: Ht. 28 mm. Dia. 44 mm. (Reg. No. 1390). From period V (Moat).
 10. An elliptical-shaped damaged low walled and flat based crucible of dull grey colour, base turned black. Size: Ht. 29 mm. Length 82 mm. Width 44 mm. (Reg. No. 11945). From a mid level of period V.
 11. Miniature cup-shaped crucible of grey colour, base flatish. Size: Ht. 12 mm. Dia. 35 mm. (Reg. No. 1391). From period V (Moat).
 12. Cylindrical cup-shaped crucible of dull grey colour, having partially sliced rim, sides with marginal concavity and bulging, bottom conical, exterior bears stains of iron rust, besides glassy residue. Size: Ht. 61 mm. Dia. 48 mm. (Reg. No. 4908). From the upper level of period V.
 13. Cylindrical cup-shaped crucible of blackish grey colour, sides with marginal concavity and bulging, both exterior and interior surface seen deposited with green incrustation superimposed by glassy residue. Size: Ht. 58 mm. Dia. 40 mm. (Reg. No. 9451). From upper level of period V.
 14. Cylindrical cup-shaped crucible of blackish grey colour, damaged showing marginal concavity, base turned conical due to thick incrustation of glassy residue. Size: Ht. 48 mm. Dia. 38 mm. (Reg. No. 9995). From the upper level of period V.
 15. Cylindrical cup-shaped crucible of buff colour, having flat sliced rim with marginal concavity at neck, with thick glassy residue at base. Size: Ht. 54 mm. Dia. 38 mm. (Reg. No. 8264). From mid level of period V.
 16. Cylindrical cup-shaped crucible of dull grey colour, damaged, ovalish splayed mouth, concave neck, bulging sides and rounded bottom, interior bear coarse surface while exterior is deposited with glassy residue. Size: Ht. 62 mm. Dia. 29 mm. (Reg. No. 7801). From mid level of period V.



Pl. 11.13 : Crucibles

17. Cylindrical cup-shaped crucible of dark colour, damaged ovalish splayed mouth concave neck, bulging sides and rounded bottom, exterior bears heavy incrustation of glassy residue. Size: Ht. 57 mm. Dia. 40 mm. (Reg. No. 5722). From mid level of period V.

18. Fragmentary hoard of at least five crucibles, a better preserved one is described thus: cylindrical cup-shaped, turned dark brownish grey, ovalish, splayed mouth with one end beaked for convenient pouring of molten substance, interior bears thick green incrustations of copper and exterior spills of glassy fuse. All the remaining base fragments bear these incrustations. Size: Ht. 52 mm. Dia. 49 mm. (Reg. No. 5787). From mid level of period V.

19. Miniature cup-shaped crucible of light grey colour, shallow interior, flat base bears an incision resembling Brahmi *la*. Size: Ht. 14 mm. Dia. 22 mm. (Reg. No. 8699). From the lower level of period V.

20. Miniature cup-shaped crucible of dull black colour, having flat sliced rim, oblique side and rounded bottom, both exterior and interior bear fused surface. Size: Ht. 22 mm. Dia. 27 mm. (Reg. No. 9592). From mid levels of period V.

21. An oval-shaped low walled and flat based crucible of buff colour. Size: Ht. 12 mm. Dia. 37 mm. (Reg. No. 7800). From mid level of period V.

22. Squat cup-shaped crucible of ash grey colour, flat base, hand

pressed rough exterior. Size: Ht. 20 mm. Dia. 28 mm. Another unillustrated specimen of similar type, upper portion damaged, wall of uneven thickness, Size: Ht. 13 mm. Dia. 24 mm. (Reg. No. 7399). From sub-period III B.

(iii) SKIN RUBBER

The antiquity of terracotta skin or flesh rubbers or scrubbers dates back to the Harappan period which continues to occur through the Chalcolithic, Iron and early Historical periods. Majority of sites of early Historical period of the Gangetic plain and Deccan as far as Talakad¹ in Karnataka have reported such material in terracotta. These rubbers of various shapes and patterns inherently bear scrubbing quality either by pecking or incising. A solitary specimen of skin rubber from Prabhas Patan (Somnath)² is inscribed with characters of the second century BCE.

There is a literary reference of skin rubber in a Buddhist text the *Chullavagga* (V. 22) as *Kataka* indicating an earthen ware used as foot scrubber; the use of which, however, was forbidden by the Buddha³. There is a reference to flesh rubber as *kuruvindaka suttī* in the *Vinaya Pitaka* used for cleansing the body by bathing. At times, twisted cloth *dukkasika* was also used for scrubbing the body⁴.

1. D.V. Devaraj, et al. *Excavations at Talakad 1992-93*, vol. I, Mysore, 1996, p. 280, pl. CXXII.

2. J.M. Nanavati, et al. *Somnath - 1956*, Vadodara, 1971.

3. C.G. Karve, Vajratil Kala (In Marathi), *Bharat Itihasa Samshodhaka Mandala Quarterly*, XXIX, pp. 88-89.

4. Moti Chandra, *Cosmetics and Coiffure in Ancient India*, JISOA, VIII, 1940, p. 75.



Pl. 11.14 : Terracotta skin rubbers

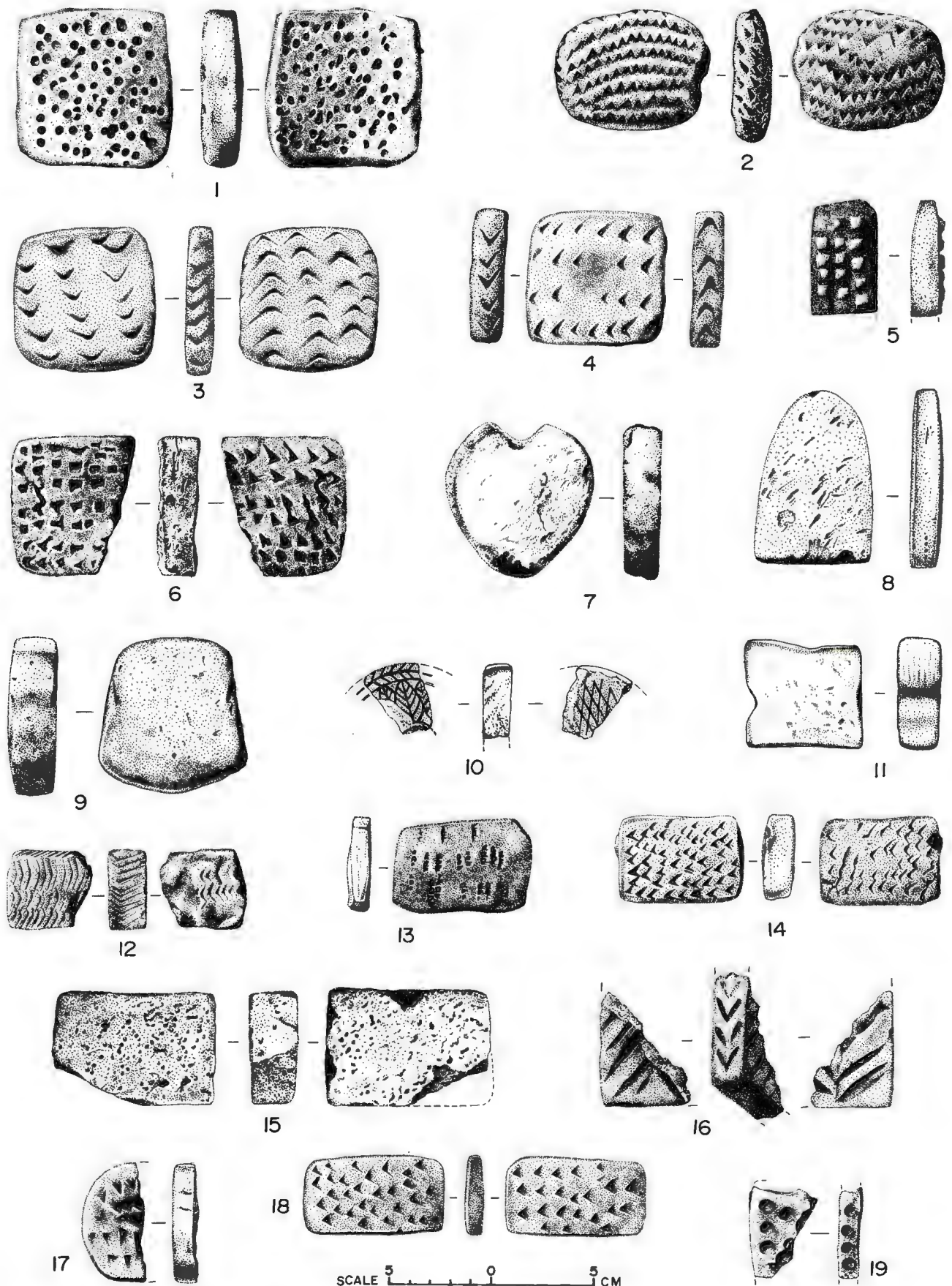


Fig. 11.12 : Terracotta skin rubbers

The skin rubbers, made mostly of terracotta, and at times also of stone, were in later times replaced by metallic ones with decorated handles. Illustrated here are specimens of various shapes like square, rectangular, discoid, trapezoidal, elliptical, and one unusual example of a cordate variety (Reg. No. 12090). The design elements are of pre-firing in execution. The patterns of incision occur of these cakes such as chevron motif; honeycomb, rows of dots, irregular pecking etc. are usually common to other contemporary sites.

There are a few exceptions wherein the patterns do not follow the usual trend, for example, Reg. No. 1252 bears vertical rows of small squares in low relief. Similarly, Reg. No. 8420 shows incisions of vegetative motif on a spherical fragment; which could also be considered as a decorative plaque than a skin rubber. The sense of symmetry shown in the making and decorating the skin rubbers highlights the aesthetic sense of the people along with high sense of hygiene.

The excavations have yielded thirty skin rubbers, out of which sixteen are of terracotta and three dressed out of potsherd (Reg. No. 12090, 2919 and 12292) have been illustrated here attributed to period V. As per the requirement, the fabric is coarse and firing temperature varies from medium to low. However, there are a few examples of skin rubbers dressed out of stone as well.

(Pl. 11.14; Fig. 11.12)

1. Skin rubber, square shaped, honeycomb pattern made by

pecking on both surface (7.7 x 7.7 x 2 cm). From mid levels of period V. (Reg. No. 944).

2. Skin rubber, elliptical horizontal rows over on both surfaces, fashioned on a potsherd (7.5 x 5 x 1.9 cm). From mid levels of period V. (Reg. No. 7722).

3. Skin rubber, squarish, broad chevrons arranged in vertical rows all over, on all the faces (6.8 x 6.8 x 1.5 cm). From lower levels of period V. (Reg. No. 1309).

4. Skin rubber, rectangular, chevrons arranged in horizontal rows, all over (7 x 6.3 x 1.8 cm). From lower levels of period V. (Reg. No. 6259).

5. Skin rubber, rectangular, vertical rows of small squares in relief on obverse, plain sides and reverse, damaged (5.3 x 3.1 x 1.6 cm). From mid levels of period V. (Reg. No. 1252).

6. Skin rubber, rectangular, fragmentary, mesh formed out of chevrons on obverse and reverse, single rows on sides (5.3 x 6.6 x 2 cm). From mid levels of period V. (Reg. No. 11725).

7. Skin rubber, cordate shape, fashioned on a potsherd, impressions of husk and other tampering materials prominent (7 x 6.8 x 2 cm). From mid levels of period V. (Reg. No. 12090).

8. Skin rubber, elliptical, surfaces bear impressions of husk, fashioned out of potsherd, vertical column of few notches on one of the two sides (8.3 x 5.7 x 1.7 cm). From mid levels of period V. (Reg. No. 2919).

9. Skin rubber, trapezoidal porous body like a pumice stone, slight depression on either side for proper grip (7.6 x 7.2 x 2.3 cm). From mid levels of period V. (Reg. No. 2362).
10. Skin rubber, fragment, spherical, showing incised vegetative motif on obverse and reverse has latticed diamonds (1.4 x thick). From mid levels of period V. (Reg. No. 8420).
11. Skin rubber, rectangular, one surface roughened, other plain, and depressions on three sides for proper grip (5.5 x 4.6 x 2.3 cm). From upper levels of period V. (Reg. No. 5313).
12. Skin rubber, rectangular, fragmented, rows of chevrons on all the faces, one surface damaged (4.3 x 3.8 x 1.9 cm). From upper most level of period V. (Reg. No. 1726).
13. Skin rubber, rectangular, a yellow encrustation on reverse, groups of vertically arranged dots on obverse, sides, reverse plain (6.9 x 4.3 x 1.2 cm). From mid levels of period V. (Reg. No. 5865).
14. Skin rubber, rectangular, a yellow encrustation on one surface, chevrons incised all over, plain sides (6.1 x 4.2 x 1.9 cm). From mid levels of period V. (Reg. No. 5331).
15. Skin rubber, rectangular, damaged, pecked all over the body unevenly, on all the faces (8 x 5.6 x 2.4 cm). From mid levels of period V. (Reg. No. 6208).
16. Skin rubber, rectangular, damaged, incised chevron decoration occur on all the four sides (5.2 x 4.2 x 1.9 cm). From upper levels of period V. (Reg. No. 4375).
17. Skin rubber, discoidal, fragment, dressed out of potsherd bearing series of uneven hatching on the obverse while reverse plain (1.4 cm thick). From early levels of period V. (Reg. No. 12292).
18. Skin rubber, rectangular rows of chevrons on both the faces while sides are plain. (7.1 x 3.9 x 1.1 cm). From upper level of period V. (Reg. No. 10025).
19. Skin rubber, rectangular fragment, honeycomb pattern on obverse (4.3 x 3.2 x 1.5 cm). From upper levels of period V (Reg. No. 8945).

(iv) TOY CART WHEELS

Among the items of play things, terracotta wheels are important components for child's amusement. These have been found universally in use since the protohistoric period down to the present day. Majority of wheels illustrated here are of terracotta with a few exceptions dressed out of pottery. Noteworthy types are a few with hubs, either on one side or on both sides while some plain. Among the decorated specimens, reference may be made of a wheel (Reg. No. 1114) bearing graffiti resembling Brahmi characters while the other (Reg. No. 11134) shows a variety of motifs consisting of a *shikhara*, a swastika and a composite design. Wheels bearing these motifs may indicate some ritualistic purport. Another wheel is decorated with spokes (Reg. No. 11435). The tradition of spoke wheel dates back to the mature

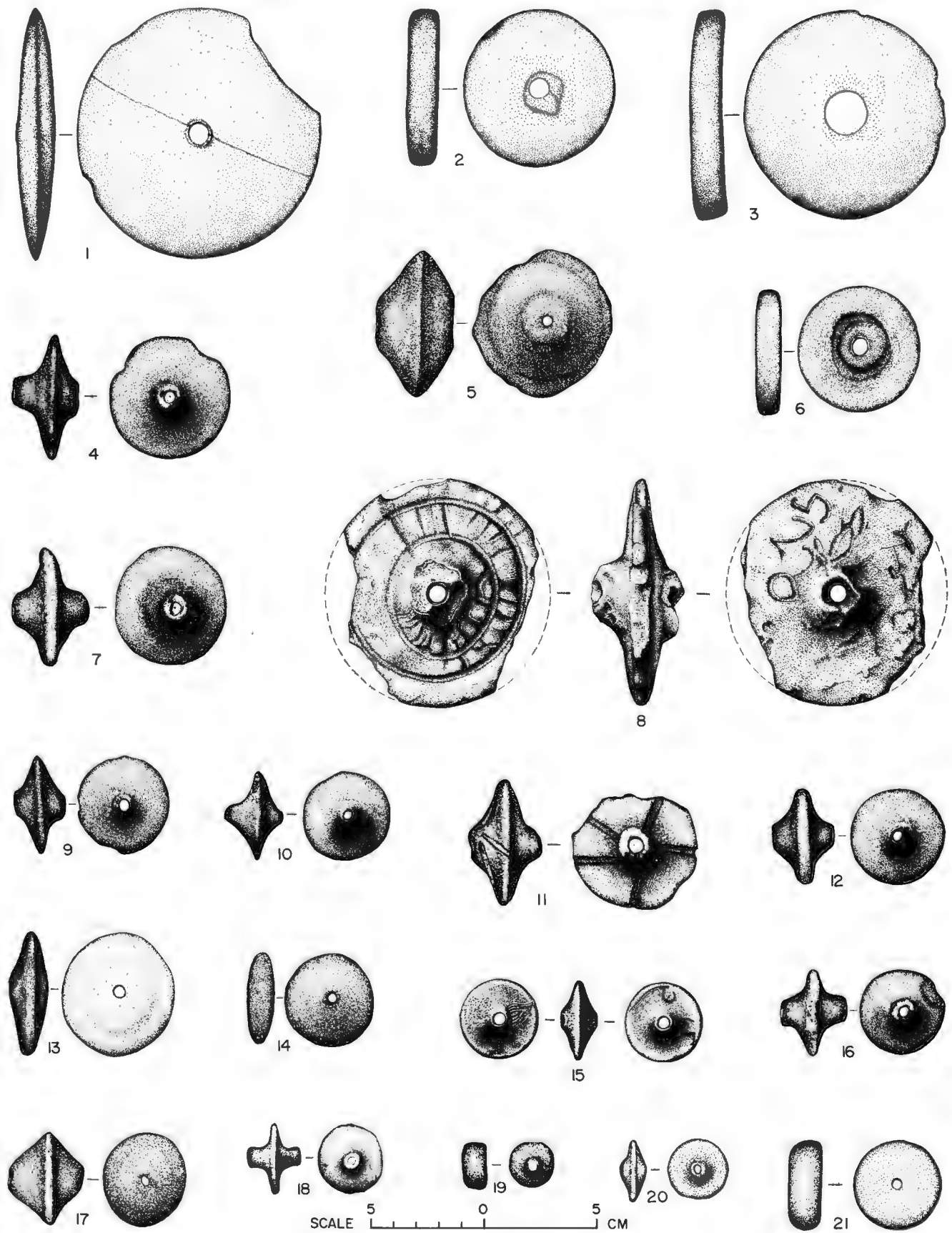


Fig. 11.13 : Toy cart wheels

Harappan period reported from Rakhigarhi¹.

(Fig. 11.13)

1. Biconvex wheel with a hole for the axle, Dia. 10.60 cm and thickness 1.6 cm. From upper level of period V. (Reg. No. 2496).
2. Wheel dressed out of micaceous dull red ware, plain section, Dia. 6.4 cm and thickness 1.4 cm. From mid levels of period V. (Reg. No. 6244).
3. Wheel dressed out of micaceous black and red ware, slightly plano-concave section. Dia. 8.5 cm, thickness: 1.5 cm. From mid levels of period V. (Reg. No. 3881).
4. Wheel with hubs on both sides, externally more pronounced, unevenly fired, biconvex section. Dia. 5 cm, thickness 1.5 cm. From mid levels of period V. (Reg. No. 676).
5. Wheel with hubs showing truncated ends, ill fired, biconvex section. Dia. 5.8 cm; thickness 3.4 cm. From mid levels of period V. (Reg. No. 989).
6. Wheel, perforation part bears groove of concentric circle, plain section. Dia. 5.2 cm; thickness 1.0 cm. From mid levels of period V. (Reg. No. 6189).
7. Wheel with hubs on both sides having black appearance, Planoconvex section. Dia. 4.5 cm; thickness 1.2 cm. From mid levels of period V. (Reg. No. 5347).
8. Wheel with hubs on both sides, incised with graffiti reminiscent to Brahmi characters on one side and incised concentric further segmented by a series of strokes, biconvex section. Dia: 10 cm and thickness: 2.1 cm. From upper levels of period V. (Reg. No. 1114).
9. Wheel with hubs on both sides, ill fired, biconvex section. Dia: 4.2 cm, thickness: 2.2 cm. From mid levels of period V. (Reg. No. 13575).
10. Wheel with hubs on both sides, ill fired, biconvex section. Dia: 4.2 cm; thickness 2.6 cm. From a pit sealed by uppermost levels of period V. (Reg. No. 13261).
11. Wheel with hubs on both sides, biconvex section, modestly incised spokes of radiating type on one side, unevenly fired. Dia: 5.3 cm, thickness 2.9 cm. From upper levels of period V. (Reg. No. 11435).
12. Wheel with hubs on both sides, biconvex section, well fired. Dia. 3.9 cm, thickness: 2.9 cm. From early levels of period V. (Reg. No. 13057).
13. Wheel without hubs, biconvex section. Dia: 5.0 cm, thickness: 1.6 cm. From mid levels of Period V. (Reg. No. 1910).
14. Wheel without hubs, elliptical section. Dia: 3.9 cm, thickness: 1.3 cm. From a pit sealed by upper most levels of period V. (Reg. No. 12982).
15. Wheel with hubs, one surface bears a group punctured

1. Amarendra Nath, Excavations at Rakhigarhi: A Harappan Metropolis in the Saraswati-Drishadvati Divide, *Puratattva*, 28, pp. 39-45; *IAR* 1997-98.

designs, one resembling a conical *shikhara* possibly of a temple, a swastika and a composite motif, unevenly fired, biconvex section. Dia: 3.5 cm, thickness: 1.7 cm. From mid levels of period V. (Reg. No. 11134).

16. Wheel with prominent hubs on both sides, biconvex section. Dia: 3.7 cm, thickness: 1.2 cm. From early levels of period V. (Reg. No. 4124).
17. Wheel with hubs on both sides showing bicone truncated section. Dia: 4.0 cm, thickness: 3.0 cm. From early levels of period V. (Reg. No. 10966).
18. Wheel with projected hubs of both sides. Dia: 3.1 cm, thickness: 2.4 cm. From a pit sealed by upper most levels of period V. (Reg. No. 13262).
19. Wheel, plain, ill fired. Dia: 1.8cm, thickness: 1.0 cm. From upper levels of period V. (Reg. No. 7369).
20. Wheel, biconvex section. Dia.6 cm, thickness: 1.1 cm. From upper levels of period V. (Reg. No. 11535).
21. Wheel, plain section, without hubs. Dia: 3.8 cm, thickness 1.5 cm. From the rampart cutting (Reg. No. 15253).

(v) SPINDLE-WHORLS

The site has reported forty one spindle-whorls of circular variety with a central hole used as a "flying wheel in a spindle (*takli*)". Majority of them illustrated here are wheel turned bearing planoconvex section.

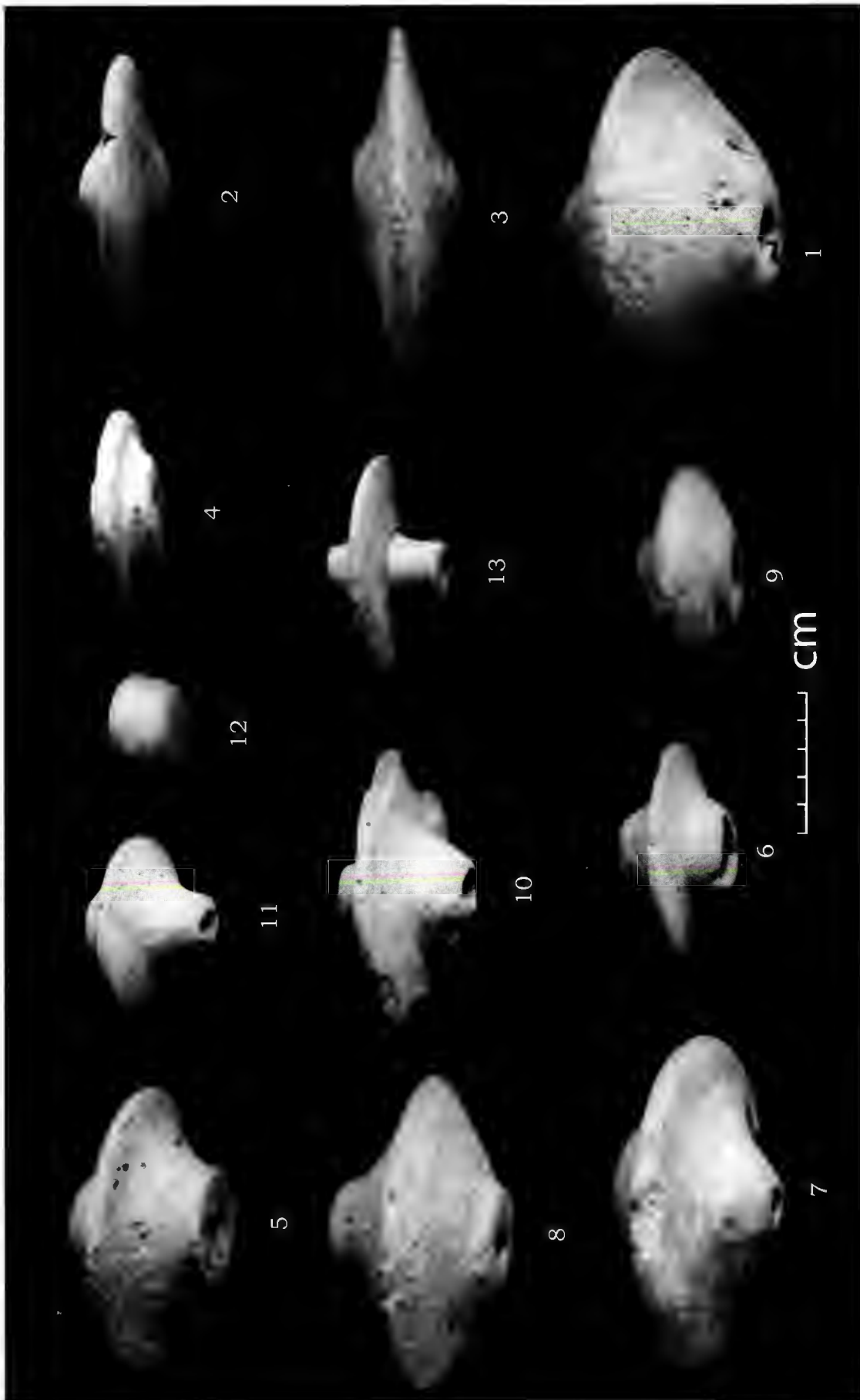
The occurrence of spindle-whorls highlights the spinning activity at the site complementing the activity of textile industry. A couple of structures (Structure No. 33 and 34) indentified as dying vats at the site supplements our observations. Such types of spindle-whorls dressed out of pottery and stone for spinning fine threads and coarse fabric are seen even today in the neighborhood of the site.

Almost all the whorls have medium to coarse fabric of micaceous clay with a few exceptions of fine variety bearing red slip. Some of the hollow whorls show an important feature wherein the basal perforation is square and the upper portion is circular. These perforations were specially made to adjust the spindle latch firmly over the whorl (Reg. No. 13526 and 4368). Broadly speaking, the whorls are of two types, represented by solid and hollow interior at times having pronounced buds on both sides and sometimes on one side.

A total of thirteen specimens are described below:

(Pl. 11.15; Fig. 11.14)

1. Spindle-whorl, concave and hollow interior, bud at end pronounced, the other is merged with the profile, dia. 12.3 cm, thickness 7.3 cm (Reg. No. 10019).
2. Spindle-whorl, concave and hollow interior, buds pronounced on both sides, disc of whorl splayed out, dia. 9.5 cm, thickness 3.1 cm (Reg. No. 7742).
3. Spindle-whorl, concave and hollow interior, relatively pronounced buds, perforation on one surface



Pl. 11.15 : Spindle-whorls

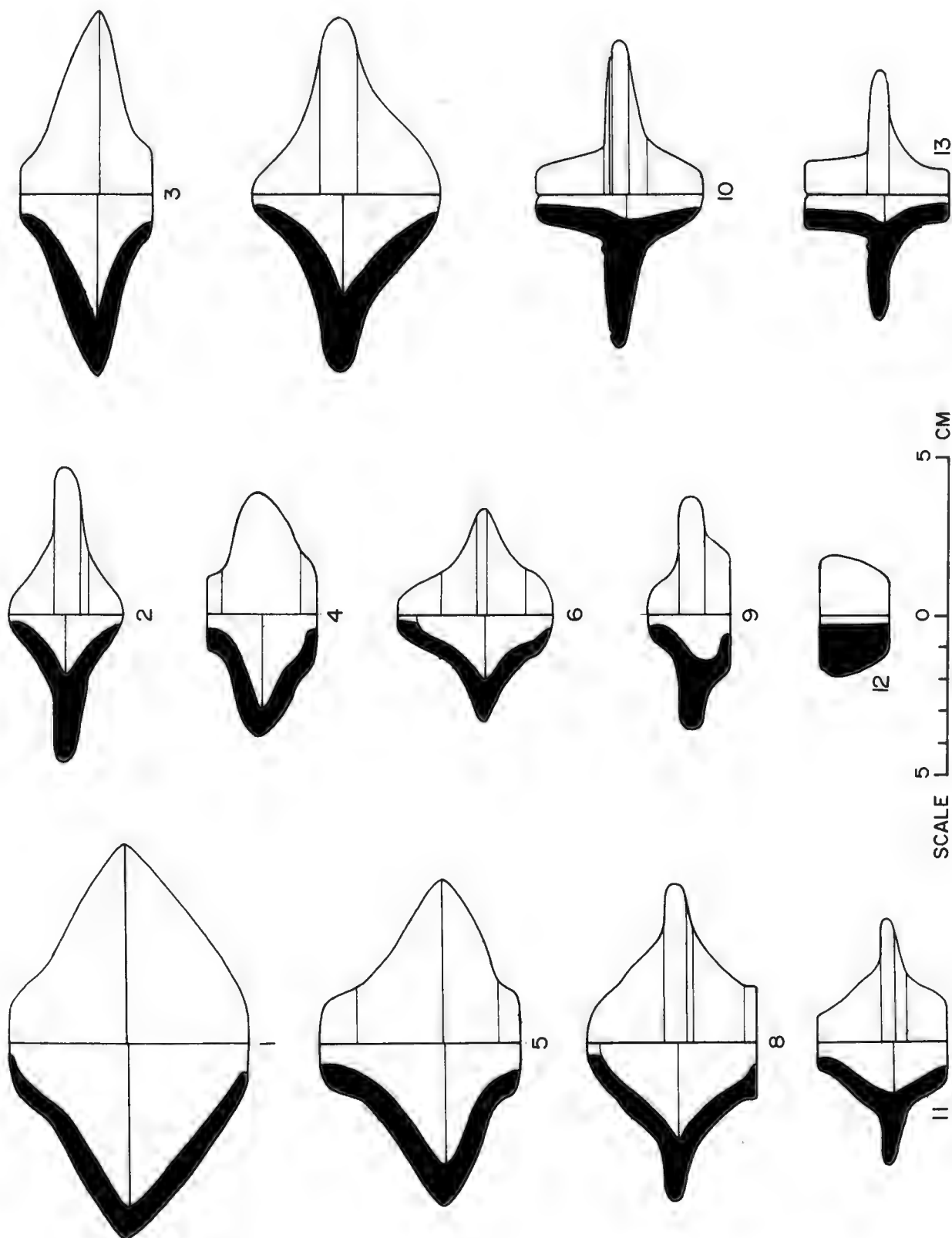


Fig. 11.14 : Spindle-whorls

is wider than the other, dia. 11.4 cm, thickness 4.4 cm (Reg. No. 8520).

4. *Ghata* shaped spindle-whorl, concave and hollow interior, perforation on one surface is relatively wider than the other, dia. 7.7 cm, thickness 3.2 cm (Reg. No. 9314).
5. Spindle-whorl, concave and hollow interior, buds pronounced both sides, perforation on one surface is relatively wider than the other, dia. 10.4 cm, thickness 6.1 cm (Reg. No. 8040).
6. Spindle-whorl of elongated variety, concave and hollow interior, perforation on one surface is relatively wider than the other, dia. 6.6 cm, thickness 5 cm (Reg. No. 12006).
7. Spindle-whorl, concave and hollow interior, perforation on one surface is relatively wider than the other, disc of whorl partially splayed out, dia. 11.2 cm, thickness 6.7 cm (Reg. No. 4114).
8. Spindle-whorl, concave and hollow interior, perforation on one surface is relatively wider than the other, disc of whorl partially splayed out, dia. 6.7 cm, thickness 0.6 cm to 5.3 cm (Reg. No. 675).
9. Spindle-whorl, concave interior, bud on one side is prominent, perforation on one surface is relatively wider than the other, disc of whorl partially splayed out, dia. 7 cm, thickness 2.2 cm (Reg. No. 10865).
10. Spindle-whorl, double convex outline, solid interior with pronounced buds, perforation on one surface is relatively wider than the other, disc of whorl

splayed out, dia. 9.2 cm, thickness 4.9 cm (Reg. No. 4368).

11. Spindle-whorl, hollow interior with pronounced bud on one side, perforation on one surface is relatively wider than the other, disc of whorl splayed out, dia. 7.6 cm, thickness 4 cm (Reg. No. 11129).
12. Spindle-whorl, thick flat, solid interior with a tiny perforation indicating use of metal spindle, dia. 3.6 cm, thickness 2.3 cm (Reg. No. 7782).
13. Spindle-whorl, double convex outline, solid interior with pronounced buds, perforation on one surface is relatively wider than the other, disc of whorl splayed out, dia. 8 cm, thickness 4.3 cm (Reg. No. 13526).

(vi) HEAD-SCRATCHERS

A few intriguing but fascinating objects generally defined as head-scratcher have come to light from the lower levels of period V. Such finds have been reported from a number of sites like Bhokardan, Bahal, Nasik, Kaundinyapura, Pauni, Rugar, Kausambi, Timbarva, Taxila, Ahichchhatra, Hastinapur and Tripuri etc. Most of these sites are strategically located on ancient trade routes denoting importance of the find. Such objects have been reported from the Northern Black Polished Ware horizon and its succeeding levels.

This enigmatic find was first described as head-scratcher¹ by Dikshit; later excavators seem to have tacitly followed his contention. He compared this find with an identical object being used by barbers for clearing

1. M.G. Dikshit, *Tripuri-1952*, Saugar, 1955, pp. 99-100.

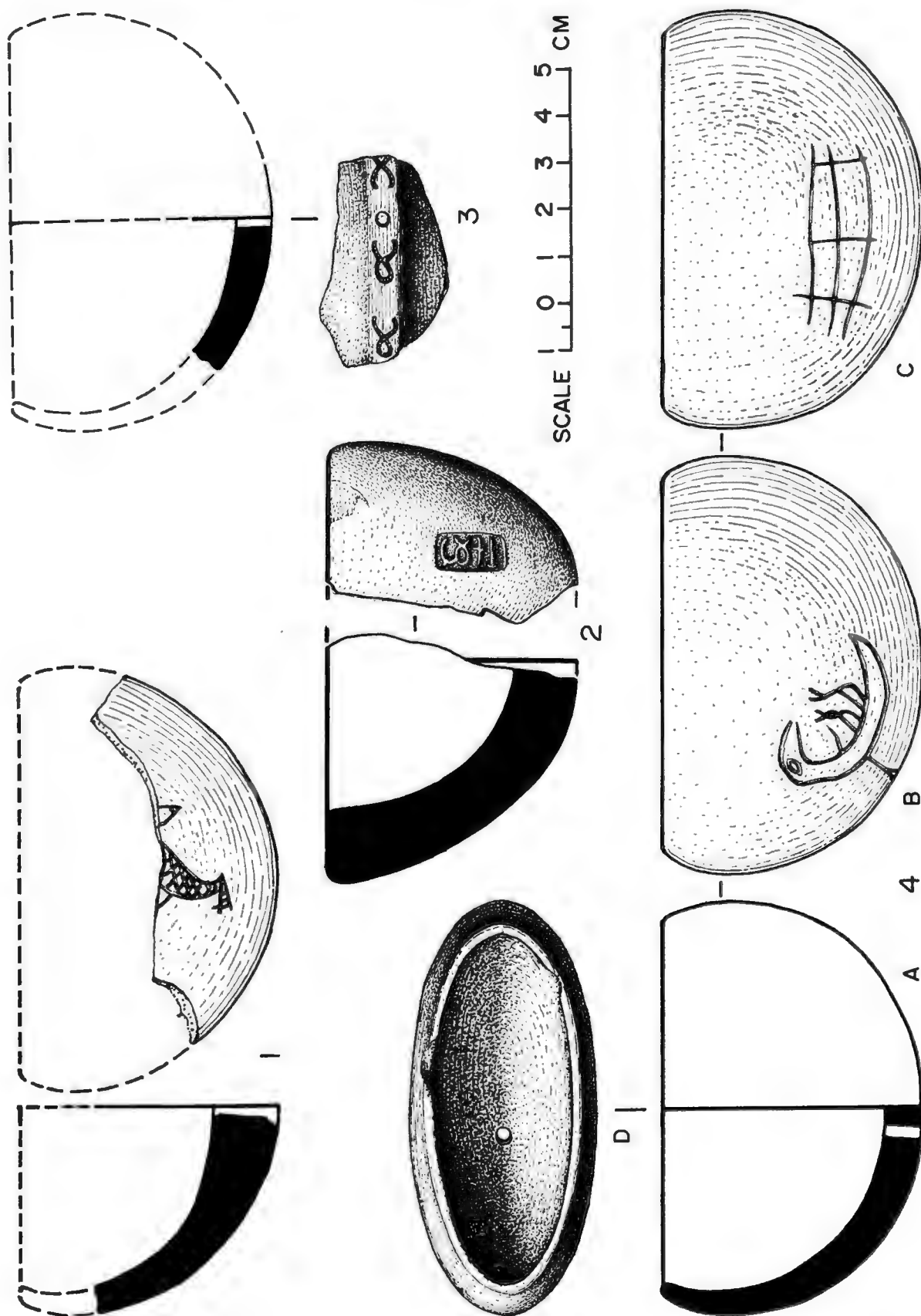


Fig. 11.15 : Head-scratchers

dandruff from scalp. However, Sankalia has described it as skin rubber¹. The ancient sites have reported regular skin rubbers akin to the ones of modern day. Experimental scratching carried over the scalp bearing dandruff with these objects found at the site did not yield the desired result.

The above explanation requires further investigation for better understanding of the use of such an important find reported from ancient urban centres.

These bowl-like objects externally bear lustrous texture caused due to constant handling. It possibly served as sound box of an *ektara* (single stringed musical instrument) or psaltery played by plucking the string. The instrument is formed of a terracotta bowl to which a bamboo strip is attached transversely, fastened over its mouth. The other end of the strip is screwed with a key to which a metal wire is tied. The wire is stretched with the help of a latch or lever fixed over the central covering of the bowl which functioned as sound box for producing limited musical note while playing with the index finger. Some of the finds (Reg. No. 4854 and 8595) bear a perforation at the base with a specific function perhaps to buckle or tie the overhead stringed strip to the bowl. One of the specimens has traces of a uniform imprint of parchment or hide-like substance originally stretched over the mouth of the bowl which was fasten to its rim. Such observations might testify its function as the sound box of a string instrument.

One of these finds bear stamped legend in Brahmi character bearing the name of an individual (Reg. No. 4857). The other specimen bears *nandipada*, an auspicious sign (Reg. No. 4854). A couple of specimens bear graffiti of a rowing boat (Reg. No. 8595) and a bird to right. Keeping in view the utilitarian value of the bowl-like object stamped with a name of an individual and auspicious sign of *nandipada* besides graffiti of a rowing boat and a bird further strengthens our stand of identification of the object as a sound box of present day *ektara*-like string instrument.

(Fig. 11.15)

1. Hollow, semi-circular outline, bi-convex specimen of a miniature pot, interior black, exterior smoky and dull red, incised with a bird to right of which the body is filled with lozenge pattern, rounded base bears a perforation. From lower level of period V (Reg. No. 4853).
2. Hollow, semi-circular outline, bi-convex specimen of a miniature pot, thick section, grey off white exterior and interior, exterior bears a legend, in early Brahmi character within an oblong incuse which reads *Samakena*. From lower level of period V (Reg. No. 4851).
3. Hollow, semi-circular outline, bi-convex specimen of a miniature pot, interior core red, exterior white slipped, well finished and smooth flat side panel, largely damaged, bears a row of corded symbols of *nandipada*, basal part bears a perforation, pierced externally at the post firing stage. From period V (Reg. No. 4854).
4. Miniature bowl of semi circular outline of fine fabric, burnt to red,

1. H.D. Sankalia and S.B. Deo, *Reports of the Excavations at Nasik and Jorwe 1950-51*, Poona, 1955.

incised exterior bears on one side a snake-eyed canoe with an oar and a couple of men seen seated in rowing position. On the other side, a graffiti of segmented 'railing-like' device generally associated with 'tree in railing' motif occurring in coins of early Historical period. From lower level of period V (Reg. No. 8595).

(vii) INCISED SLING BALLS

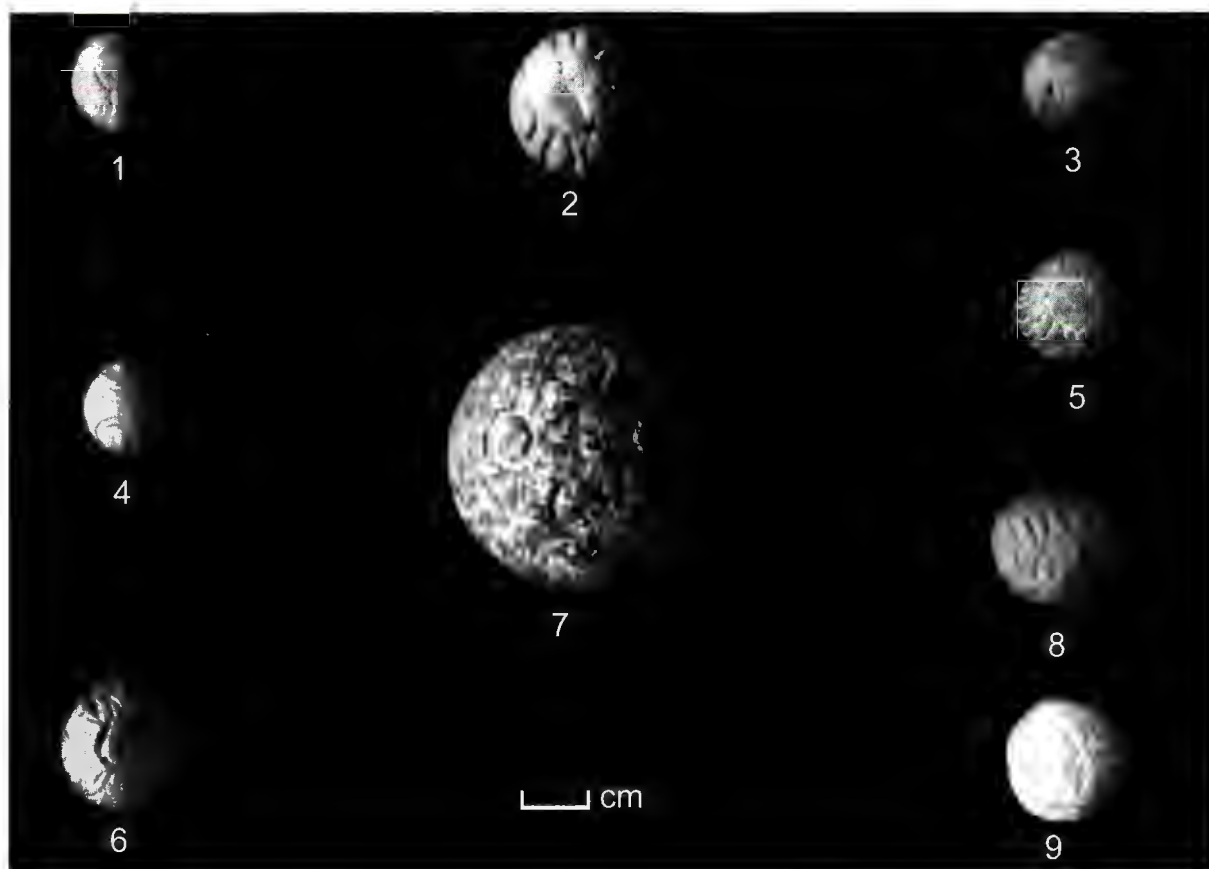
The antiquity of sling balls dates back to the Mesolithic times which continues to be used in the present days possibly in a similar manner. Generally the sling balls or marbles of stone and terracotta are used as projectile released by means of slings, double stringed bows, catapults or simply by hand. Apart from hurling, the marbles of tiny variety might have been used as play items, besides weights.

The excavations have roughly registered one hundred and twenty five terracotta and identical number of stone sling balls. The terracotta sling balls or marbles are of rough and fine fabric at times mixed with mica and granules; a few of the fine fabric variety bears some floral decorative elements of auspicious nature suggesting its ritualistic functions. The incisions have been made with the help of sharp tipped engravers and are carefully executed on the tiny hemispherical surface of the balls. Potters used kneaded clay for preparing these items. The clay dough was individually rotated by putting equal pressure with both the hands in order to gain circular and smooth profile.

Out of nine decorated specimens illustrated here, one is of stone (Reg. No. 9386) and rest terracotta.

(Pl. 11.16; Fig. 11.16)

1. Marble incised with a lotus like flower showing a series of petals appended to a pericarp, below there is another circular line, dia. 1.5 cm. From surface exploration (Reg. No. 7686).
2. Marble divided into two halves by an incised line, both the segments have floral design of identical nature as noted above, dia. 2.3 cm. From upper level of period V (Reg. No. 12557).
3. Marble incised with concentric circles on the body, dia. 1.5 cm. From upper level of period V (Reg. No. 5996).
4. Marble incised with six circlets arranged in two groups of three, on the upper and lower surface, dia. 1.3 cm. From upper level of period V (Reg. No. 5028).
5. Marble incised with sun-like radiating strokes, dia. 1.6 cm. From mid level of period V (Reg. No. 12490).
6. Marble incised with a lotus like flower showing a series of petals appended to a pericarp, below there is a coiled loop, dia. 2.8 cm. From upper level of period V (Reg. No. 9142).
7. Well dressed sandstone sling ball or weight bearing Ujjain symbol (dumb bell), dia. 3.8. From upper level of period V (Reg. No. 9386).
8. Marble incised with radiating and circular lines, dia. 1.9 cm. From mid level of period V (Reg. No. 7495).
9. Marble divided into two halves by an incised line, upper half incised



Pl. 11.16 : Incised sling balls

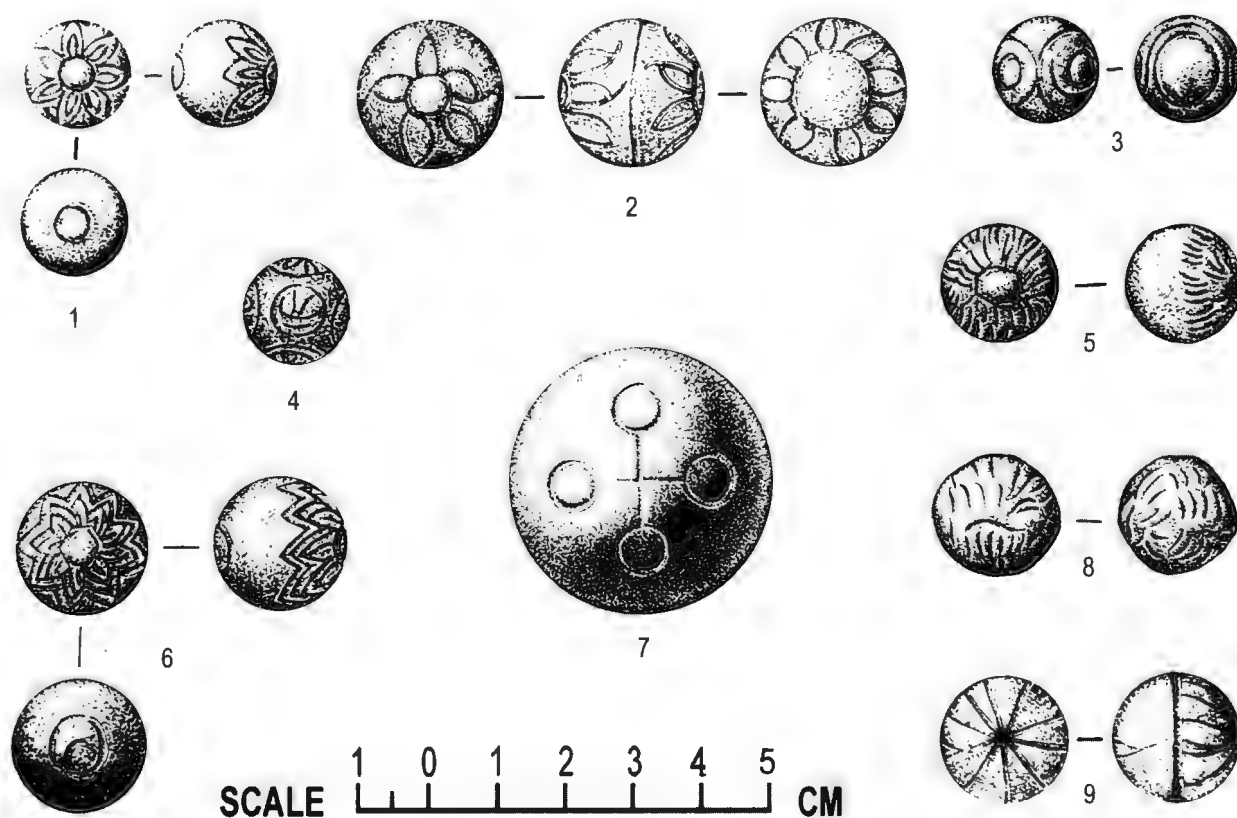


Fig. 11.16 : Incised sling balls

with radiating lines while lower is plain, dia. 2.2 cm. From early level of period V (Reg. No. 11959).

(viii) EAR STUDS

The site has reported a sizable number of terracotta ear studs of plain and decorated varieties. These spool-like studs are of circular and elliptical shapes. These are usually of light brown, dark or reddish-brown colour. Traditionally, the discoid shaped ear studs have been identified as *tatankachakara*. Such types of studs usually have a groove in the barrel which fits into the hole of earlobe. The Bharhut relief shows identical *tatankachakara* studded in the earlobes of *yakshi* figurines. The tradition of such types of ear studs has continued to be used by some of the village folk of Madhya Pradesh, Chattishgarh and parts of Northeast India.

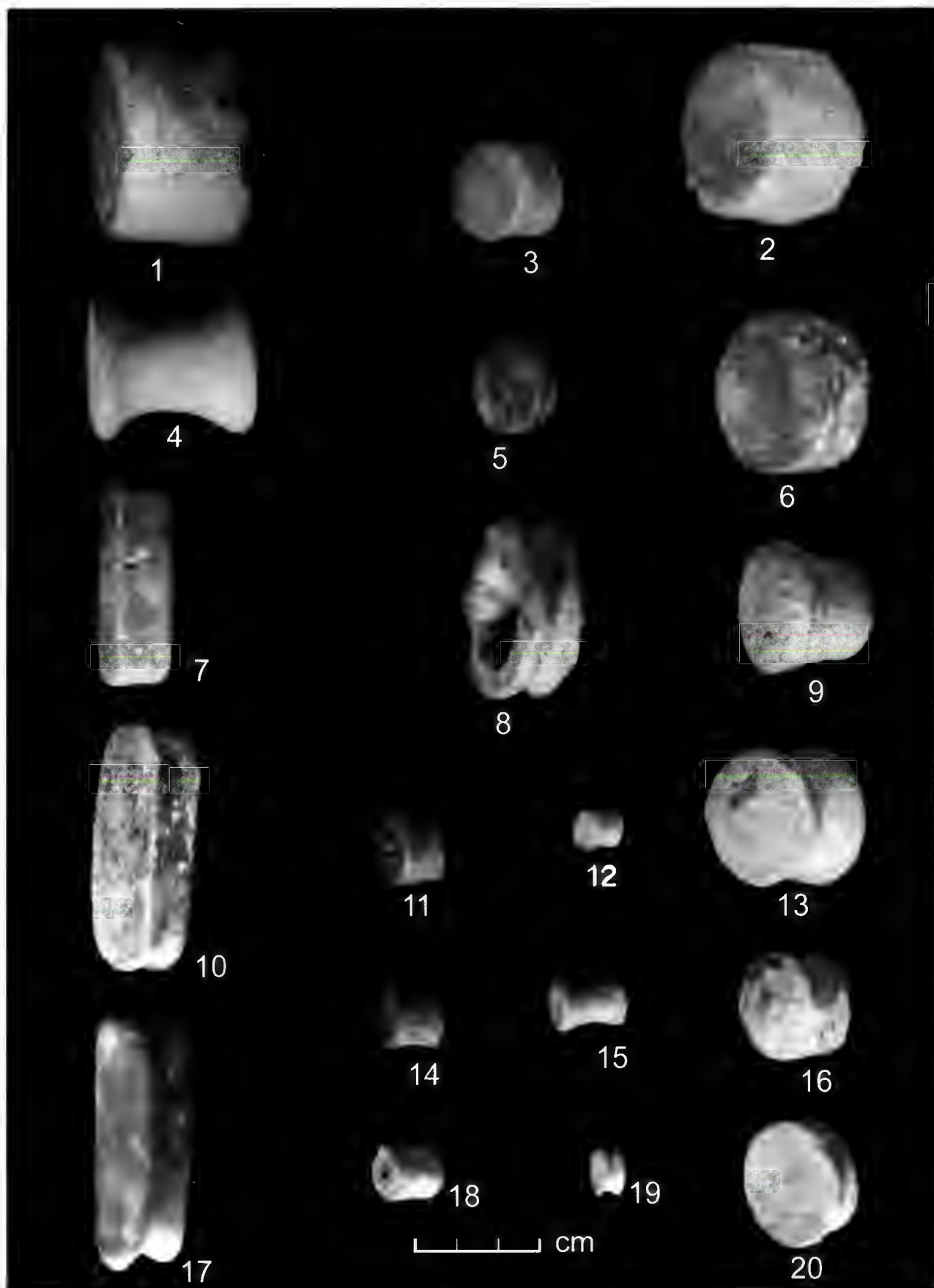
Some of the items of spool of oblong shape illustrated here might have served as equipments of textile industry as reeling of thread in spinning (Reg. No. 8492) and as shuttle or bobbin (Reg. No. 11320 & 487) for carrying the weft-thread across between the warp threads while weaving fabric.

(a) Ear Studs : Plain Variety

Detailed here are twenty terracotta specimens of plain variety.

(Pl. 11.17; Fig. 11.17)

1. Ear stud, short cylindrical, straight sided, dia. 4.6 cm, breadth 3.1 cm. From mid level of period V (Reg. No. 11928).
2. Ear stud, short cylindrical, straight sided, dia. 3.9 cm, breadth 2.8 cm. From upper level of period V (Reg. No. 6922).
3. Ear stud of *tatankachakara* variety, slightly concave sided, dia. 2.3 cm, breadth 1.6 cm. From mid level of period V (Reg. No. 10132).
4. Ear stud of spool type, concave sided, dia. 3 cm, breadth 3.8 cm. From mid level of period V (Reg. No. 8492).
5. Ear stud with a groove, dia. 2.3 cm, breadth 1.8 cm. From early level of period V (Reg. No. 13102).
6. Ear stud with a groove, dia. 3.7 cm, breadth 1.4 cm. From lower level of period V (Reg. No. 8357).
7. Ear stud, oblong, straight sided, length 4.9 cm, breadth 1.3 cm. From lower level of sub-period III B (Reg. No. 13073).
8. Ear stud with a central hole, concave sided, dia. 4.2 cm, breadth 1.5 cm. From upper level of period V (Reg. No. 4488).
9. Ear stud, truncated, partially tapered, dia. 3 cm, breadth 3 cm. From upper level of period V (Reg. No. 11204).
10. Ear stud, oblong, concave sided, length 5.9 cm, breadth 2.3 cm. From early level of period V (Reg. No. 11320).
11. Ear stud with shallow grooved profile, perforated centre, dia. 1.9 cm, breadth 1.9 cm. From lower level of period V (Reg. No. 12497).
12. Ear stud of reel shape, dia. 1 cm, breadth 0.9 cm. From upper level of period V (Reg. No. 12119).
13. Ear stud of *tatankachakara* variety, concave sided, dia. 3.3 cm, breadth 2.2 cm. From upper level of period V (Reg. No. 12477).



Pl. 11.17 : Ear studs: plain variety

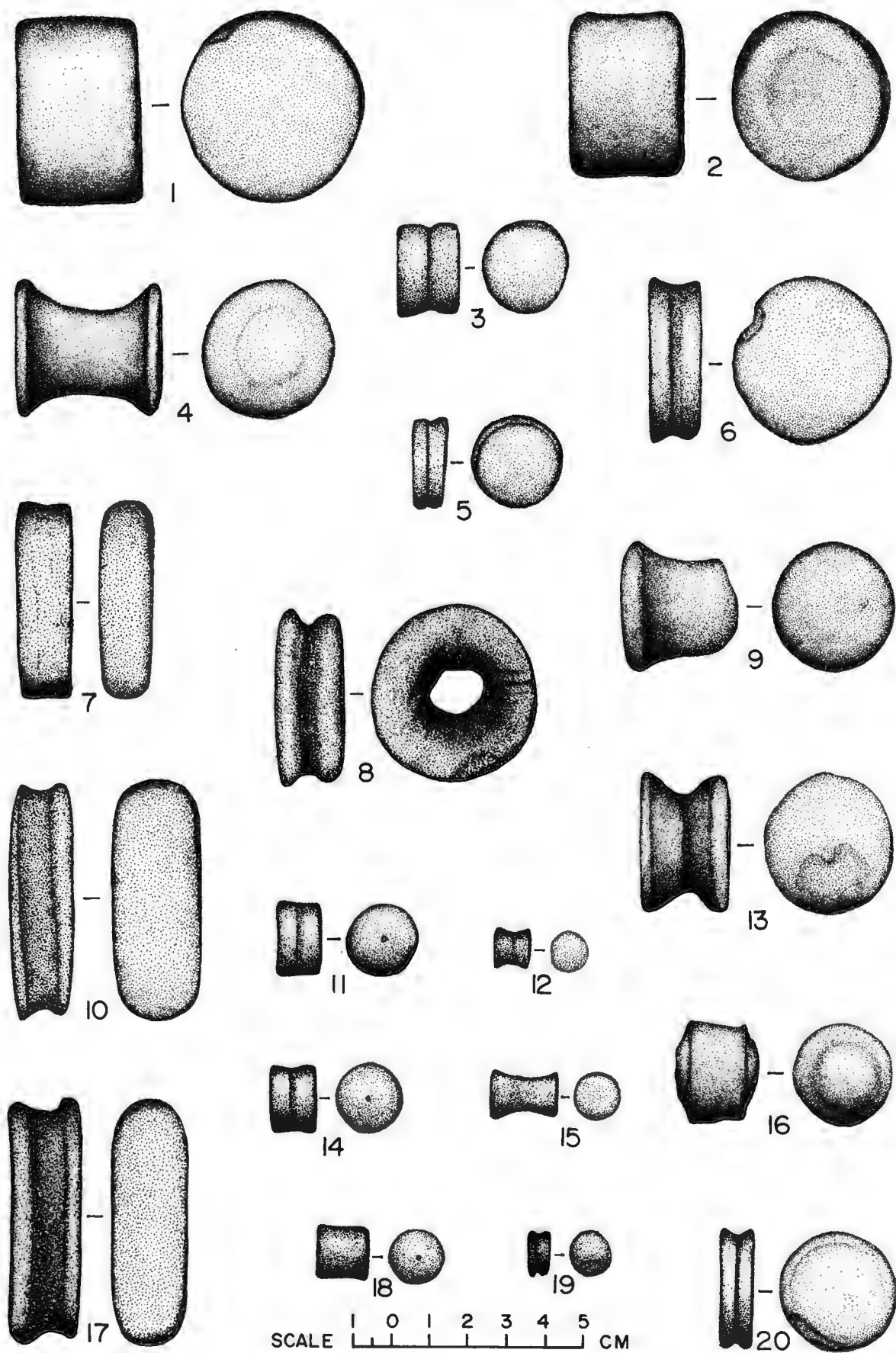


Fig. 11.17 : Ear studs: plain variety

14. Ear stud with shallow grooved profile, dia. 1.7 cm, breadth 1.2 cm. From mid level of period V (Reg. No.11745).

15. Ear stud of spool variety, dia. 1.2 cm, breadth 1.8 cm. From upper level of period V (Reg. No.10725).

16. Ear stud showing bulged upper and lower ends, straight sided, dia. 2.4 cm, breadth 2.1 cm. From mid level of period V (Reg. No. 2093).

17. Ear stud, oblong, concave sided, length 6 cm, breadth 2 cm. From mid level of period V (Reg. No. 487).

18. Ear stud of cylindrical shape with a perforation in the longer axis, partially concave side, dia. 1.4 cm, breadth 1.3 cm. From mid level of period V (Reg. No. 11075).

19. Ear stud of miniature variety bearing groove in the profile, dia. 1.1 cm, breadth 0.7 cm. From mid level of period V (Reg. No. 12705).

20. Ear stud bearing groove in the profile, dia. 3 cm, breadth 1 cm. From mid level of period V (Reg. No. 13140).

(b) Ear Studs : Decorated Variety

Among the decorated variety, there are examples of pierced incisions forming circles besides pronounced rays like grooves emanating from the centre and a few with radiating rays and petal motif. The decorative element of rays emanating from the centre seems to be more preferred design over others. This motif starts occurring from sub-period III A. On an average, the diameter of the illustrated specimens measures 2.5 cm. Illustrated here are eleven specimens of this variety.

(Pl. 11.18; Fig. 11.18)

1. Ear stud of spool variety, one end damaged while the other show radiating grooves emanating from a circle, length 5.6 cm, dia. 4 cm. From upper level of period V (Reg. No.7386).

2. Ear stud with pronounced rays emanating from the centre, classified as *tatankachakara*, dia. 3.3 cm, breadth 1.6 cm. From early level of period V (Reg. No.10994).

3. Ear stud, short cylindrical, straight sided, punctured with concentric circles, dia. 2.5 cm, breadth 1.6 cm. From lower level of period V (Reg. No. 4401).

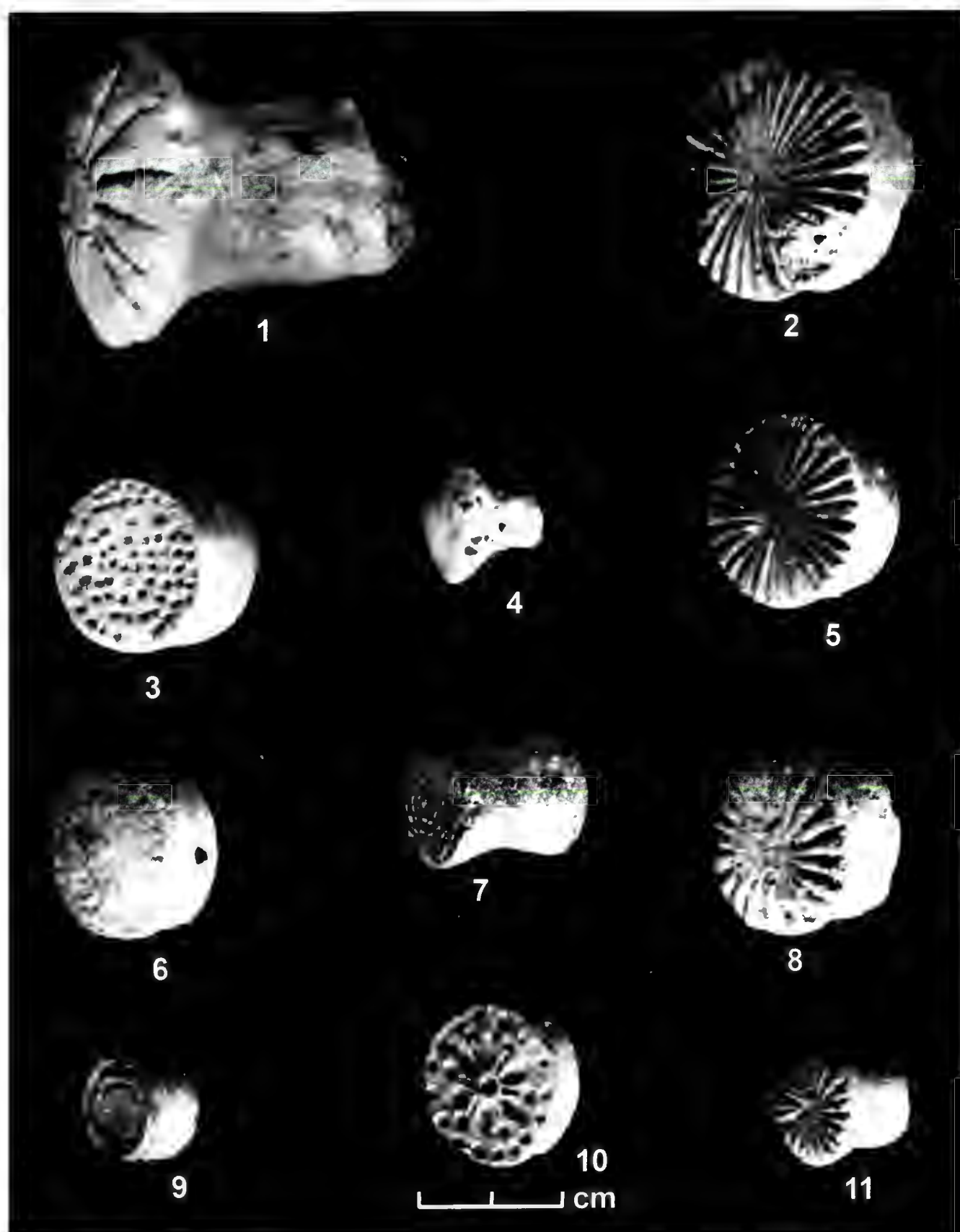
4. Ear stud, conical, truncated, bearing pierced incisions, dia. 1.9 cm, breadth 1.7 cm. From mid level of period V (Reg. No. 9005).

5. Ear stud with pronounced rays emanating from the centre, classified as *tatankachakara* with a grooved profile, dia. 2.6 cm, breadth 1.2 cm. From lower level of sub-period III B (Reg. No. 7249).

6. Ear stud with radiating rays emanating from the circle, tip of the rays terminates into dots, dia. 2.5 cm, breadth 1.3 cm. From mid level of period V (Reg. No. 10540).

7. Ear stud of reeled variety bearing punctured concentric circles on both faces, dia. 1.8 cm, length 2.2 cm. From lower level of period V (Reg. No. 225).

8. Ear stud with radiating rays, dia. 2.5 cm, breadth 1.5 cm. From mid level of sub-period III A (Reg. No. 7916).



Pl. 11.18 : Ear studs: decorated variety

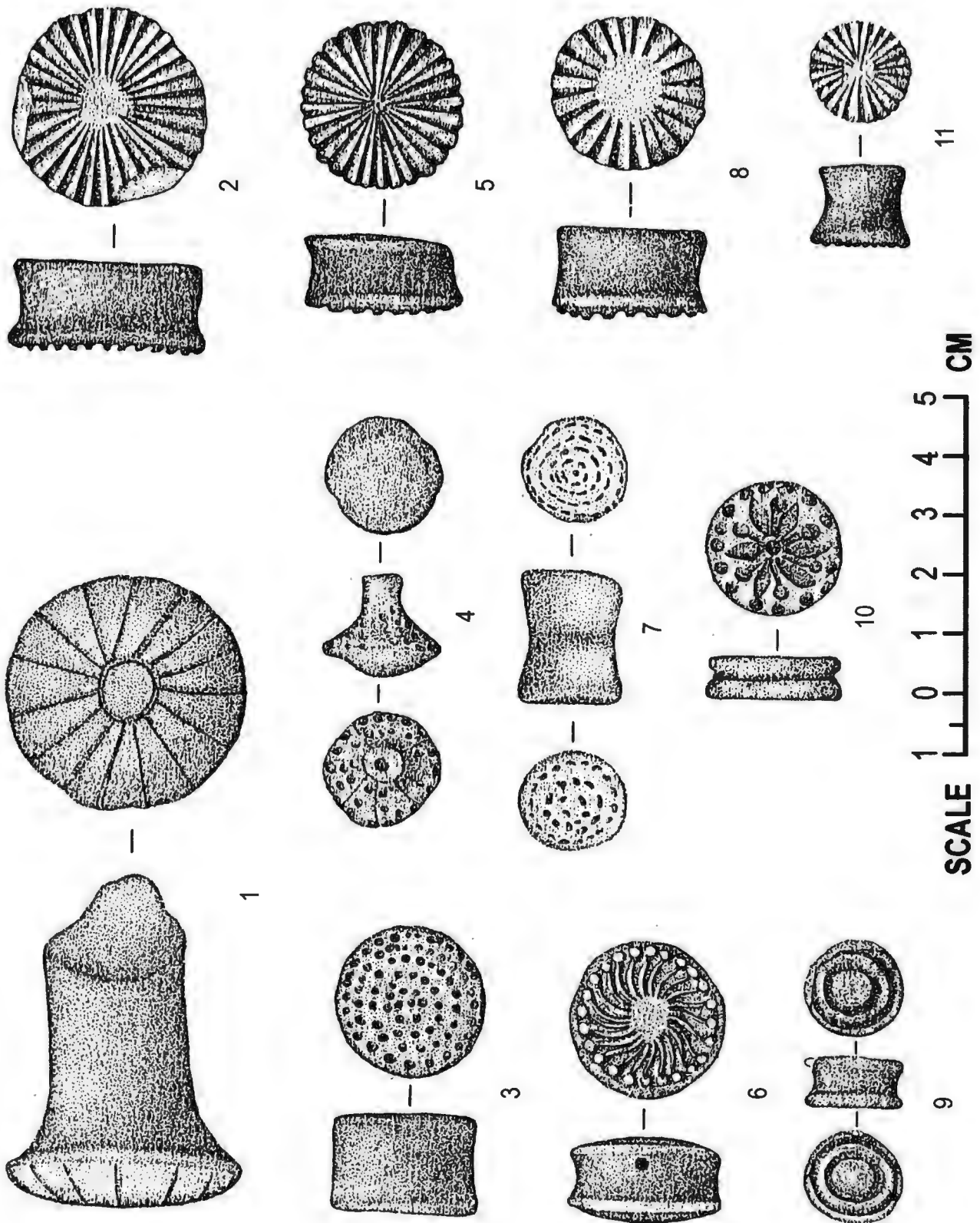


Fig. 11.18 : Ear studs: decorated variety

9. Ear stud with deep concentric circles on both sides, dia. 1.5 cm, breadth 0.8 cm. From upper level of period V (Reg. No. 2035).
10. Ear stud, upper face show floral motif of six petals alternately separated by strokes, emanating from the centre and peripheral flange bears incised dots forming a circle, dia. 2.3 cm, breadth 0.7 cm. From late level of period V (Reg. No. 12922).
11. Ear stud, short cylindrical upper face bears grooves of ray emanating from the centre, dia. 1.6 cm, breadth 1.3 cm. From mid level of period IV (Reg. No. 202).

(ix) STOPPERS (Pl. 11.19; Fig. 11.19)

The excavations have yielded quite a good number of stoppers, mostly in terracotta with a few exceptions in stone. Going by the variance in the diameters of the stoppers, it can be inferred that these were used for medium to small sized containers having narrow mouth of varying size.

Majority of the illustrated specimens have cylindrical bodies with tapering ends with some exceptions capped with knobs (Reg. No. 5939, 6475 & 1746). All these specimens are handmade. A couple of examples (Reg. No. 12193 & 12189) have been reported from the toe cuttings of the rampart and moat. Except one in sandstone (Reg. No. 3605), all others are in terracotta.

Described below are fifteen specimens:

1. Stopper, well fired, thick tapering cylindrical of buff colour, dia. 3.2 cm, length 4.5 cm. From the toe-line of moat and rampart (Reg. No. 12193).
2. Stopper, well fired, fine fabric, slender type tapering body of buff colour, dia. 0.7 cm, length 1.6 cm. From upper levels of period V (Reg. No. 6116).
3. Stopper, well fired, medium fabric, medium cylindrical tapering body with dull red slip, dia. 2.6 cm, length 3.7 cm. From upper levels of period V (Reg. No. 6153).
4. Stopper, fine fabric, well fired, slender type tapering body of buff colour, dia. 1 cm, length 2.7 cm. From upper level of period V (Reg. No. 4019).
5. Stopper of medium fabric, partially burnished and well fired, medium cylindrical body of brown colour, dia. 1.7 cm, length 4.8 cm. From upper level of period V (Reg. No. 12213).
6. Stopper of medium fabric, well fired, with a hemispherical knob and a conical end of blackish brown colour, dia. 1.6 cm, length 1.8 cm. From mid level of period V (Reg. No. 5939).
7. Stopper of coarse fabric, ill fired, medium cylindrical body, tapering sides of black colour, dia. 1.8 cm, length 3.8 cm. From upper level of period V (Reg. No. 570).
8. Stopper of micaceous coarse fabric, ill fired, perforation across the body in the upper half, medium cylindrical tapering body of dark brown colour, dia. 2.2 cm, length 3.9 cm. From mid level of period V (Reg. No. 12420).

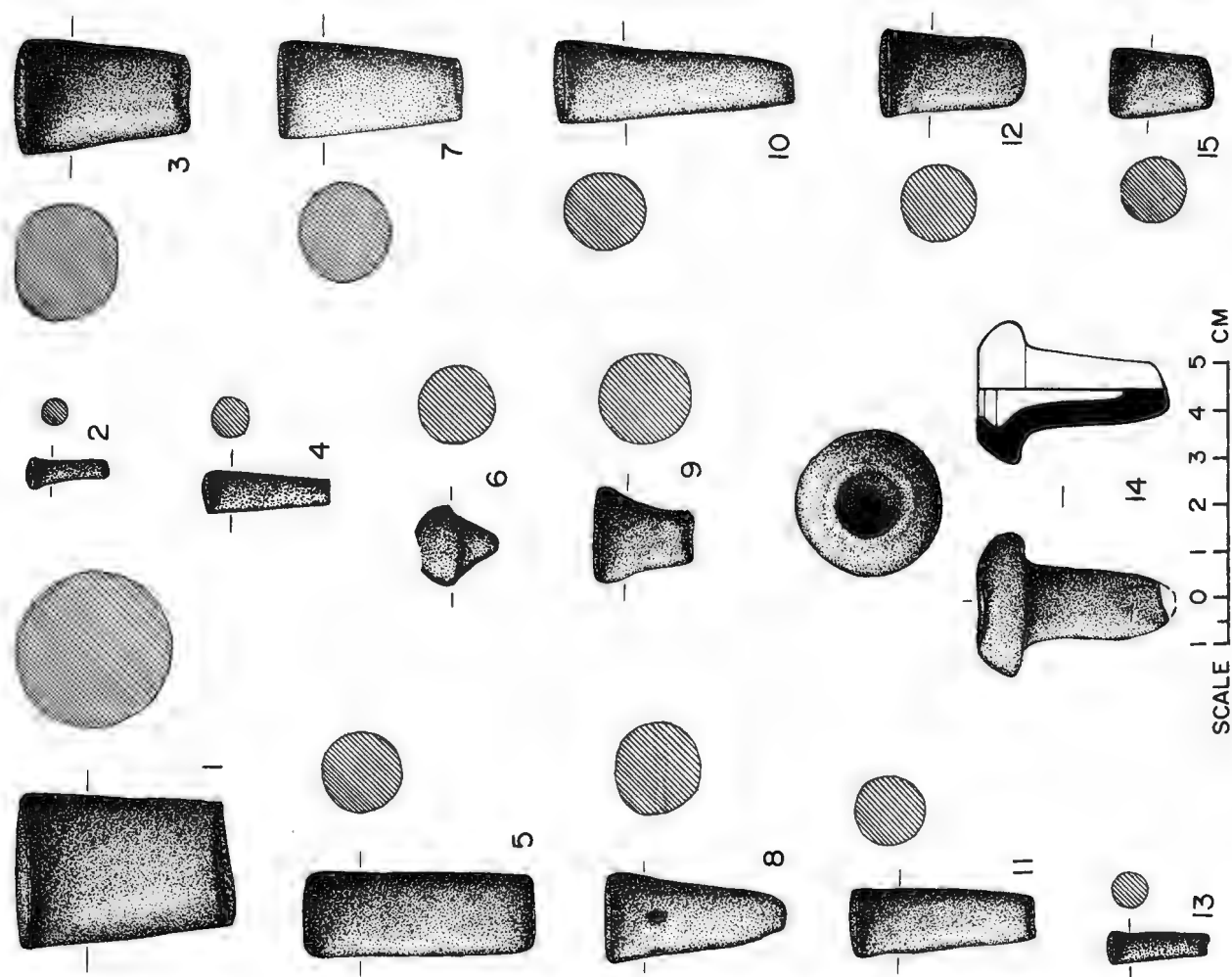
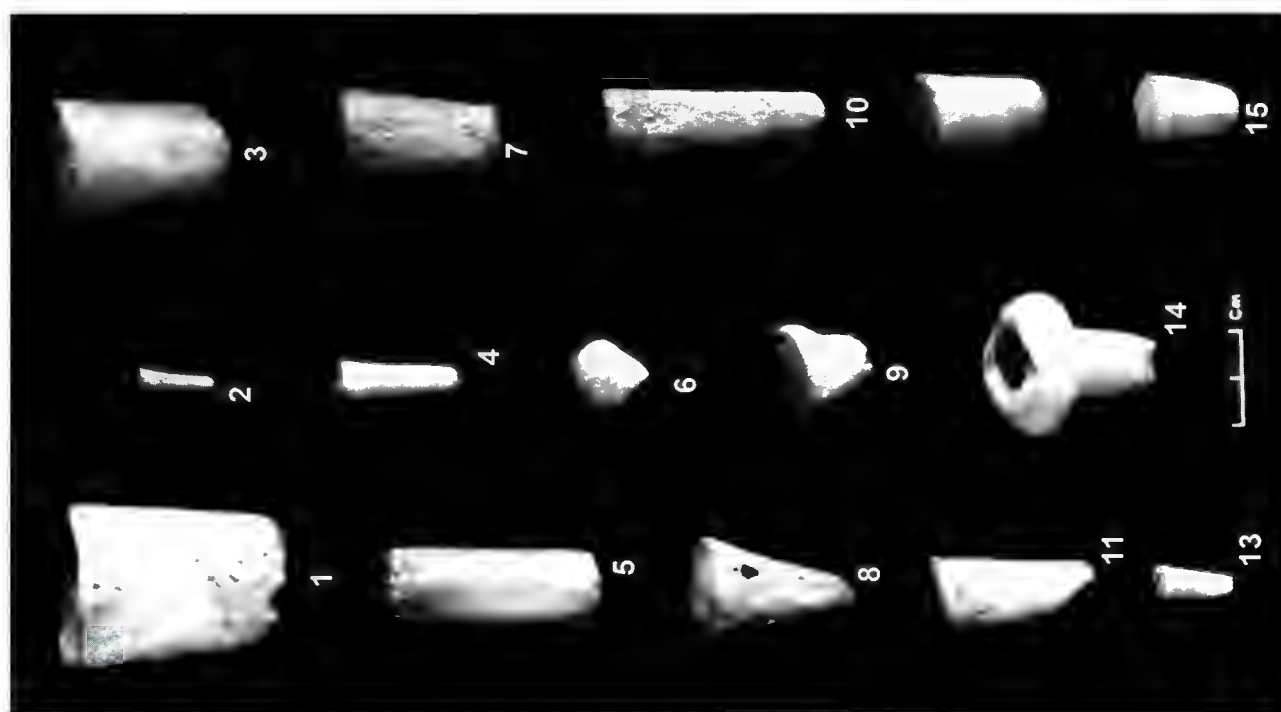


Fig. 11.19 : Stoppers



Pl. 11.19 : Stoppers

9. Stopper of medium fabric, well fired, slightly concave near the broader end, knob like tapering body of blackish brown colour, dia. 2 cm, length 2.1 cm. From mid level of period V (Reg. No. 6475).
10. Stopper of medium fabric, ill fired, cylindrical tapering body of black and dull red colour, dia. 1.7 cm, length 5 cm. From period V (Reg. No. 11735).
11. Stopper of fine fabric, ill fired, cylindrical tapering body of black colour with buff slip, dia. 1.6 cm, length 3.9 cm. From period V (Reg. No. 7284).
12. Stopper of fine fabric, well fired, cylindrical tapering body of black colour, dia. 1.8 cm, length 3.1 cm. From mid level of period V (Reg. No. 11853).
13. Stopper of fine fabric, well fired, slender type tapering body of buff colour, dia. 1.7 cm, length 2.1 cm. From the cuttings of toe-line of the moat and rampart (Reg. No. 12189).
14. Stopper of fine fabric, well fired, obliquely cut and incurved rim like knob with a cylindrical tapering end, buff in colour with dull brown slip, dia. 3 cm, length 4 cm. From upper levels of period V (Reg. No. 1746).
15. Stopper of sandstone, smoothly dressed, cylindrical tapering body of pinkish colour, dia. 1.5 cm, length 2.1 cm. From upper level of period V (Reg. No. 3605).

(x) ASSORTED FINDS

Besides terracotta figurines, other terracotta objects of decorative

nature are grouped as miscellaneous type. Barring a miniature size red sandstone medallion (Reg. No. 10239), rests are of terracotta. Among the most decorative specimens, there are a couple of moulded (Reg. No. 4442 & 2975; 8539) and incised varieties (Reg. No. 6393, 2483). The moulded specimens of a medallion noted above are part of a single plaque, however, found in two different areas in two different field seasons.

Another moulded specimen (Reg. No. 8539) is of an ear ornament of coil formation with terminating studs. Similar type of ornament of fragmentary nature (Reg. No. 10968) has also been included. Likewise, a variant in lead (Reg. No. 3918) has been described separately below in the description of lead objects. An identical type in gold has been reported from a Satavahana site located in the Andhra region¹.

(Pl. 11.20; Fig. 11.20)

A total of eleven illustrated specimens are described below:

1. A couple of moulded fragments illustrated together are part of a medallion with a perforation in the upper margin for hanging. The space on the obverse is meticulously filled with a central rosette of bigger size surrounded by similar type of rosettes of relatively smaller size, while the intermediary space between two consecutive ones, being filled by tiny roundels bearing criss-cross pattern. The reverse space is filled with interlinked quadrupetalled flowers

1. Mechel Postel, *Ornaments of Ancient India*, p. 34.



Pl. 11.20 : Assorted finds

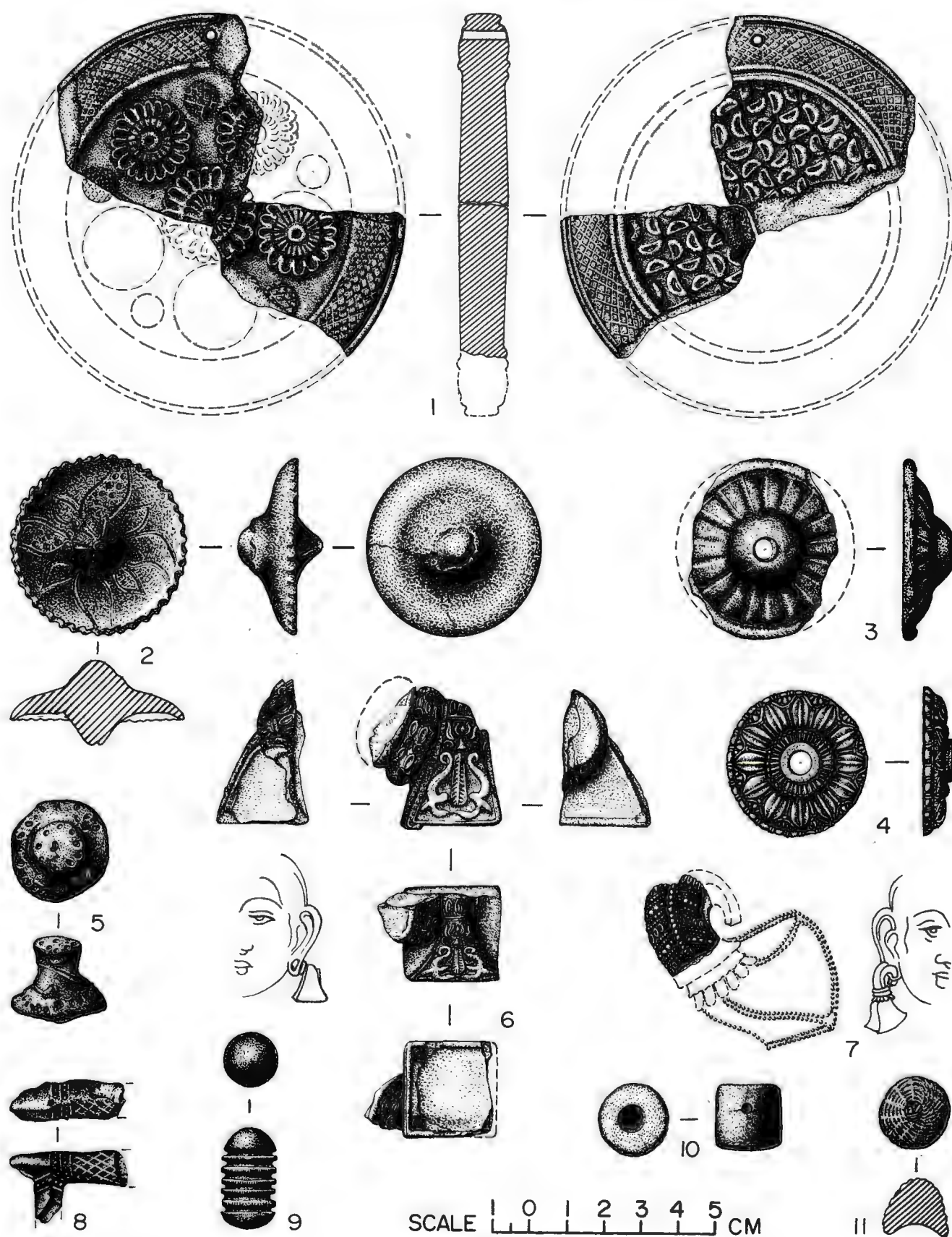


Fig. 11.20 : Assorted finds

forming a mesh-like motif. The overall impression of the motif is reminiscent of an elaborate tapestry work. The motifs on either face of the medallion are within a thick band bearing oblique criss-cross hatching. Black colour, fired under reduced condition. From upper levels of period V (Reg. No. 12975 & 4442).

2. An indented disc shaped handmade object, incised with floral motif comprising of four large petals, the space between the two consecutive ones is filled up by small buds, all encircling a central carpel, shaped in the form of a grooved conical knob like projection, corresponding to which there is a boss on the reverse. The edge of the disc show twisted features, an out-product of thumb nail device. Dull red colour. From the upper levels of period V (Reg. No. 6393).
3. A moulded spoked wheel with a prominent hub at the centre and spokes emanating from it. Partially damaged, buff colour. From upper levels of period V (Reg. No. 5974).
4. A lotus medallion of red sandstone with a central perforation. There are twelve petals arranged around a band bearing thirty six small vertical strokes, emanating from the centre, the circumference is bedecked with a string of double collared barrels shaped bead motif. Lathe turned, partially damaged. From upper levels of period V (Reg. No. 10239).
5. A knob like handmade object, bearing punctured incisions all over of irregular nature. From mid levels of period V (Reg. No. 2483).
6. A moulded ear ornament, comprising of double coiled ends terminating in a trapezoidal block bearing three decorated surfaces. The frontal surface bears a trident like motif over which a lotus motif is seen. The lateral face shows traces of bicone beaded motif, whereas the basal portion shows circlets with pellets in the centre. The coiled mass attached to the trapezoidal block is bedecked with rows of string studded alternately with tabular and bicone beads. Well finished, partially damaged, bright red colour. From mid levels of period V (Reg. No. 8539).
7. Part of a double coiled portion of a moulded ear ornament, a variant of No. 6, portions of each coil are separated by string of pearls while each coil is bedecked with oblique bands of pearls and bicone bead motifs. Black colour, fired under reduced condition. From early levels of period V (Reg. 10968).
8. A triangular fragment of furniture possibly of a chair, produced out of double mould, bears a blind hole at one end, body decorated with latticed diamond motif and intermediate bands of dots near the corners. Dull red colour, well fired. From mid level of period V (Reg. No. 10374).
9. A handmade cylindrical object either of votary nature or unfinished bead having hemispherical ends, bearing six grooves. Unevenly fired, black and

red colour. From mid level of period V (Reg. No. 4194).¹

10. Truncated cylindrical hub-like handmade object with three blind holes, one at the top and two on frontal surface, could have been used as part of some mechanical device. Dull red colour, medium fabric and well fired. From mid level of period V (Reg. No. 3032).
11. Truncated ovoid miniature basket like handmade object, upper end has soot marks, lower end sunken, rows of horizontal incisions all over the body. Dull red colour, ill-fired. From upper level of period V (Reg. No. 3472).

(xi) VOTIVE TANKS (Pl. 11.21; Fig. 11.21)

Votive tanks are hand modelled terracotta miniature tanks and/or shrines used as objects of ritual. These finds have been generally assigned to the early Historical period but their genre can be traced back to the mature Harappan period. Some comparable finds have been reported in the Chinese as well as the Sakas or Parthians context². As of now, these objects are found distributed from Taxila in the north to Nagarjunakona in the south and Chirand in the east to Kolhapur in the west. In most of the cases, these are found at sites located near water bodies or on the river fronts. As regards its context, it is noted that four votive tanks at Sirkap were found *in-situ* by the side of a Buddhist stupa³. In

another context, such tanks are known as *Yama-pukar* dedicated by maidens in Bengal to *Yama*, the God of death suggesting a hoary past of the ritual. It may be derived from the above inferences that the rituals had indigenous origin.

The votive tank finds have been compared with the tanks used in *Kumari-Vrata* rite, being practiced in the traditional villages of Bengal. These tanks show features of shrine, flight of steps, female figurines (mother goddess), rims either perched with lamps or birds or both alternately and aquatic animals. The goddess *Yamabudi* worshipped in this rite is comparable to the mother goddess or goddess of fertility. The steps in the tank may indicate an ascent to heaven by performing this rite⁴.

The excavations have yielded altogether twenty nine fragments of terracotta votive tanks out of which fourteen selected ones are described here, covering the representative types. On the basis of certain characteristic traits, the votive tanks performing certain divine rights of tutelary nature are represented by the following types: (a) circular wheel-turned bowl with leap-cups applied to rims (Sr. No. 9) reminiscent to Kernos⁵ type found in Harappan context; such type of Kernos are still being produced in Moradabad and sold on the occasion of Deepawali festival, (b) plain rectangular walled enclosure (Sr.

1. Also reported at Kolhapur; H.D. Sankalia and M.G. Dikshit, *Excavations at Brahmapuri (Kolhapur)*, 1945-46, Poona, 1953, p. 96, pl. XXXVI-A-9.

2. V.S. Agrawala, *op. cit.*, p. 125.

3. Explorations at Sirkap, *Archaeological Survey of India Annual Report 1924-25*, p. 50, pl. 13, fig. 2.

4. Sudhir Ranjan Das, Clay figurines of the Kumari-Vratas of Bengal, *JISOA*, XIV, 1948, pp. 91-94.

5. B.M. Pande, Harappan Ring Kernoi, *EW*, 1971, pp. 311-328; George F. Dales and Jonathan Mark Kenoyer, *Excavations at Mohenjodaro, Pakistan: The Pottery*, Philadelphia, 1986, pp. 420-421 & 442, pl. 5B & 5C, fig. 92-1.



Pl. 11.21 : Votive tank; an *in situ* view

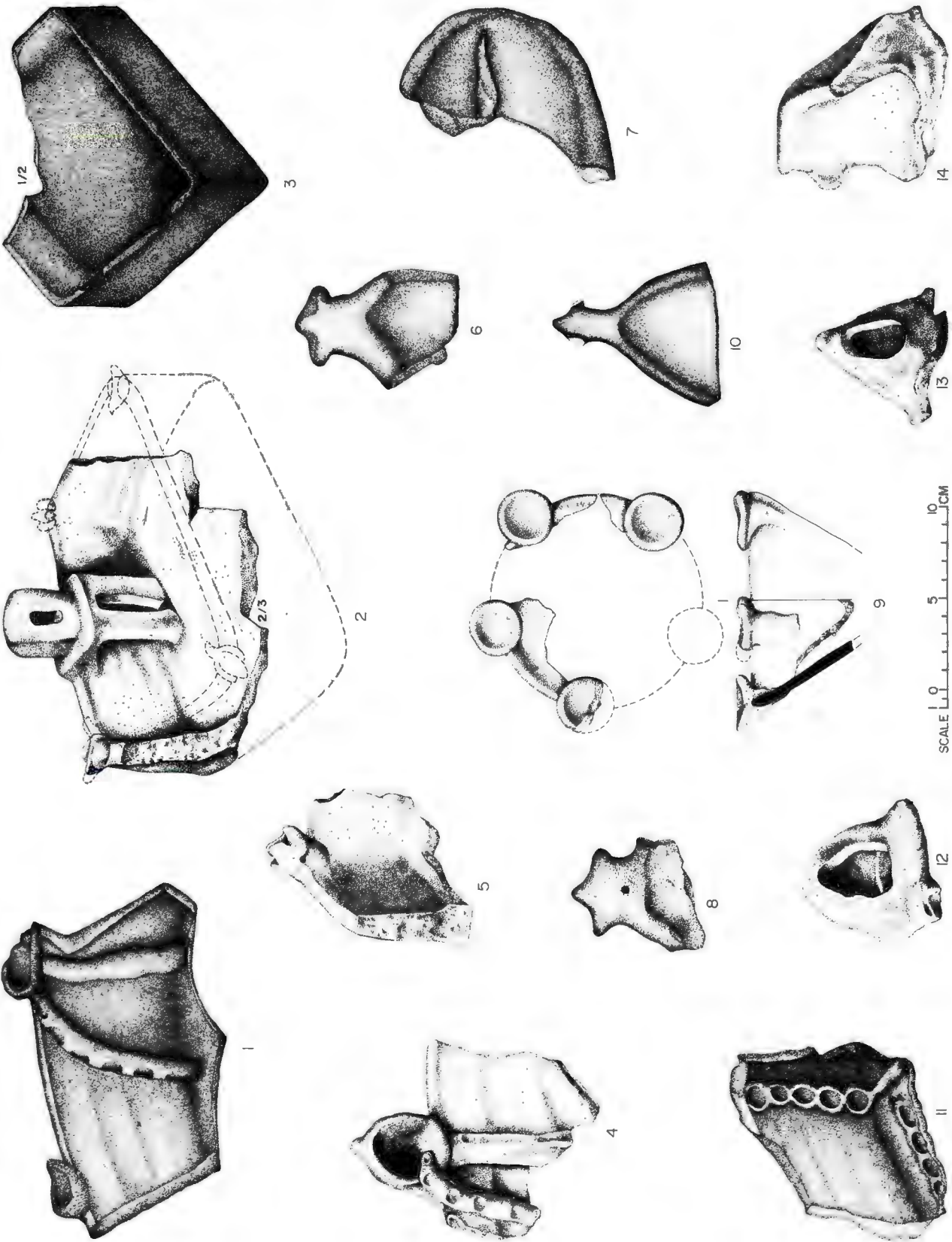


Fig. 11.21 : Terracotta Votive tank

No. 3) reminiscent to the one reported at Surkotada¹ and Rakhigarhi², (c) oval or elliptical enclosure with snake-like aquatic animal at the base (Sr. No. 7), (d) oblong enclosure showing birds with spread-out wings, perched on wall top, (e) oblong enclosure with birds with spread-out wings perched on the corner wall, with an integrated shrine projected internally, supported by a couple of pillars (Sr. No. 2), (f) a variant of type (e) wherein an appliqué staircase is added as means to approach the shrine having *gavaksha* (ogee) type façade (Sr. No. 4), (g) archaic divinity type forming part of a lug to shallow boat-shaped votive tank (Sr. No. 8 & 10).

(Fig. 11.21)

1. Fragment of a relatively circular votive tank of medium fabric red ware having flaring walls and flat rimmed top bedecked with lamps fixed at intervals. Out of two appliqué bands, one is straight below the lamp while the other, slightly removed from the other band, forming a curve against the wall. These bands bear certain depressions suggesting its function as steps leading to the lamp post. Dia. 14 cm, height 8 cm, thickness 1.5 cm. From period V (Reg. No. 13378).
2. Fragment of a rectangular votive tank of unevenly fired coarse fabric red ware showing thick walls and round corners. Over the central part of the wall, an overhanging shrine is seen supported by two

pillars affixed at the base of the tank. The chamber of the shrine has tapering sides, while the corners of the tank are adorned with bird motif. Length 8 cm, height of the wall 8.8 cm, thickness 2.5 cm. From period V (Reg. No. 11397) (Pl. 11.21).

3. Fragment of a plain rectangular votive tank of reddish clay mixed with sand and gravel particles showing un-oxidized smoky core. The dwarf walls of the tank are marked by thin top and roundish corners with a thick base. Length 25 cm, width 21 cm, height 7.5 cm, thickness of wall 1.3 cm, thickness of base 3 cm. From period V (Reg. No. 13615).
4. Fragment of a bowl shaped votive tank of coarse fabric red ware with an enclosure wall and flat upper surface showing circular hallow shrine supported by a single vertical pillar and oblique staircase, steps indicated by depressions. The façade of the shrine is of *gavaksha* type. Height 8.5 cm, thickness 1.4 cm. From the upper level of period V (Reg. No. 4373).
5. Fragment of an oblong votive tank of coarse fabric red ware with an enclosure wall having round corner and flat top adorned with bird motif. Length 8.5 cm, height 7 cm, thickness 2 cm. From the upper level of period V (Reg. No. 4829).
6. Fragment of a corner of votive tank of medium fabric red ware marked by three lobed solid projection, indicating bird like motif. Length 9.3 cm, width 6.1 cm, thickness 2 cm. From the mid level of period V.

1. Jagat Pati Joshi, *Excavation at Surkotada and Exploration in Kutch*, MASI no. 87, New Delhi, 1990, p. 300, pl. LXII-A.

2. Amarendra Nath, *Excavations at Rakhigarhi: A Harappan Metropolis in the Saraswati-Drishadvati*

Divide, Puratattva, 28, pp. 39-45; IAR 1997-98, p. 60, pl. 43.

7. Fragment of an oval shaped votive tank of coarse fabric red ware, with short tapering walls, thick base marked by an aquatic animal. Length 19 cm, height 3 cm, thickness 1.5 cm.
8. Fragment of a corner of votive tank of coarse fabric red ware with three lobbed projections marked by a deep circular incision in the centre, concave sides. Length 7.5 cm, width 6.2 cm, thickness 1.9 cm. From lower level of period V (Reg. No. 4837).
9. Fragment of a bowl shaped 'Kernos' type votive tank of coarse fabric red ware with featureless rim adorned with lamps at regular interval all along the rim. Dia. 12 cm. From upper level of period V.
10. Fragment of a boat-shaped votive tank of coarse fabric micaceous red ware with an elongated three lobbed projection, a variant of Sr. No. 6. Length 9.5 cm, width 7.5 cm, thickness 1.3 cm. From the upper level of period V.
11. Fragment of a circular portion of votive tank of coarse fabric micaceous red ware with thick walls marked by flat top. The wall and portion of the base show vertical and horizontal bands of appliqué roundels indicating steps. At the base of the tank is seen tail portion of an aquatic animal. Dia. 20 cm, height 10 cm, thickness 1.7 cm. From the upper level of period V (Reg. No. 9103).
12. *Gavaksha* type hollow shrine detached from a votive tank of coarse fabric red ware, basal portion show traces of supporting pillar attachments. Length 7 cm, width 6 cm. From period V.
13. Conical shaped shrine detached from a votive tank of medium fabric red ware. A variant of Sr. No. 12. Length 6 cm, width 5 cm. From lower level of period V.
14. Fragment of a rectangular shaped votive tank of coarse fabric red ware, treated with red slip; with tapering side walls and thick base. From upper level of period V (Reg. No. 4834).

(xii) LAMPS

(Fig. 11.22)

Lamps have important place in the ritualistic performances since time immemorial. Terracotta lamps being the earliest form are found in good number in archaeological context whereas stone and metal are found relatively in less number. Typologically there are a variety of lamps broadly classified as plain and decorative with or without leap. Such varieties of lamps are being produced even today; some of them are wheel turned and a few are moulded and handmade. A decorative variety of copper lamp has been described along with other copper objects in this report (Pl. 13.12-3; Fig. 13.13-3).

Nine terracotta lamps of handmade and wheel turned varieties have been illustrated here are from period V. Some of them show prominent beak to hold the wicker while a few have marginal beak. Most of these bear smoke marks suggesting their constant use.

1. Lamp of coarse fabric red ware showing hollow interior with plain featureless rim marked by out-curved beaked projection, oblique sides and circular pedestal base.
2. Lamp of coarse fabric red ware showing shallow interior with plain featureless rim showing marginal beak

- projection, incurved sides and circular pedestal base.
3. Lamp of coarse fabric red ware showing shallow interior with featureless rim and out-curved beaked projection, incurved sides and circular pedestal base.
 4. Lamp of coarse fabric dull red ware showing shallow interior with vertical featureless rim, drooping beaked projection, oblique sides and short circular pedestal base.
 5. Handmade lamp of medium fabric dull red ware with vertical featureless rim, prominent beaked projection, oblique convex sides and circular pedestal base.
 6. Handmade lamp of medium fabric red ware with incurved featureless rim, prominent beaked projection and thick flat base.
 7. Lamp of medium fabric red ware with short vertical featureless rim showing beaked projection, oblique sides and circular base.
 8. Handmade sun dried miniature lamp of medium fabric dull brownish ware, vertical featureless rim, short pressed concave sides and thick flat base.
 9. Lamp of medium fabric dull red ware with vertical featureless rim showing beaked projection, in-turned side and vertically cut circular pedestal base.

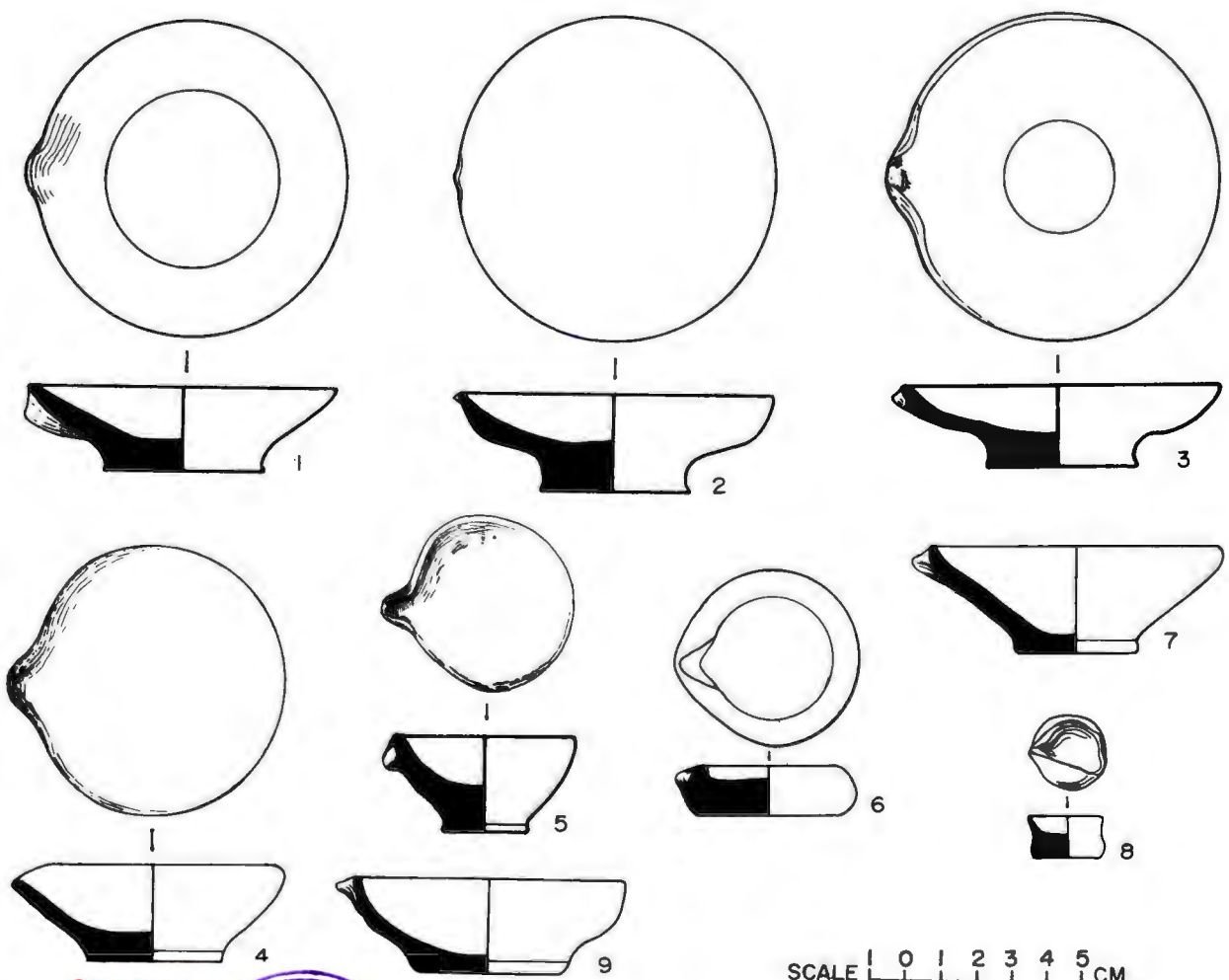


Fig. 11.22 : Terracotta lamps

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