

## **Chapter V: Material Analysis**

This chapter primarily documents the material culture found during the exploratory surveys with the objective of building the cultural history of the area. Owing to the lack of archaeological literature from Jammu, the index site of Ropar and Sanghol in the neighbouring region of Punjab were initially selected for the comparative study of artifact. This was relevant because of the geographical affiliation of the Punjab region with Jammu. In the absence of published reports from both these sites, the observations recorded by the researcher in handling the pottery of Sanghol and Ropar, to a large extent, helped the comparative study. In addition to these two, data from sites further south of Punjab were considered for comparison.

The major focus of this chapter is to offer meaningful information on artefacts discovered at various locations within the research area. It discusses the researcher's section scraping of ditches dug out by locals for domestic purposes at two locations: Biyan Tibba and Satowali. The data from these two locations established a verifiable framework for the chronological sequence. The radiocarbon dates from these portions, as described previously (see Table IV.5 and IV.6, were critical in verifying the researcher's hypothesised sequence.

In addition, the pottery and other artifacts recovered from other sites in the explorations are also discussed in detail for assessing the overall cultural development. Based on these considerations, as already discussed in Chapter IV, a broad fourfold cultural timeframe for the region is proposed in the thesis.

- Period I: Neolithic/Harappan- Includes the meagre evidence of the Neolithic and Harappan sites in Jammu
- Period II: 4-5<sup>th</sup> century BCE to 1<sup>st</sup> Century BCE/ CE
- Period III: 1<sup>st</sup> century BCE/ CE to 3<sup>rd</sup>/4<sup>th</sup> century CE
- Period IV: 3<sup>rd</sup>/4<sup>th</sup> century CE-10<sup>th</sup>/11<sup>th</sup> century CE

The classification attempted for the current research involves a broader timeframe. The primary reason for this is the unavailability of published data from excavated material in the research area and limitations for excavating any sites by the researcher. This has hindered the process of being specific with the periodical classification. Secondly, Sinopoli's (2004) observation that change in political power or prestige is not related to pace of change in material culture has been given notable consideration. She has opined that archaeological evidence and historical evidence work on different time scales. Hence pinpointing any pottery type to a particular dynasty like Kushana or Gupta is a logical fallacy. Uesugi (2014) and Miller (2017) also stress upon the fact that affiliating time with dynasties does not give genuine information about the past. The idea that potter's art mirrors political or social condition, according to Shepard (1956), is naïve.

### *V.1 Period I*

This period is primarily defined based on material culture from the two excavated sites of Neolithic Malpur and Harappan Manda (see chapter IV; section IV.1.1.1 and IV.1.1.2 for site details).

The current explorations from the site of Manda did not yield any Harappan material. However, from Malpur, stone tools including a celt and a unifacially flaked stone tool were recovered (Fig. V.1 A-B).

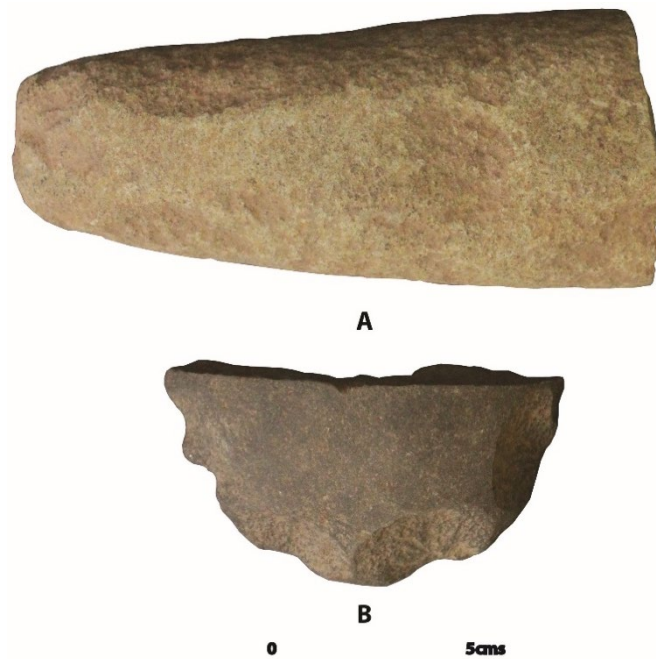


Figure V.1: A – Neolithic stone celt from Malpur; B – Unifacially flaked artifact from the site of Malpur

In addition to these above-mentioned excavated sites, the site of Kot Garhi was documented as a Harappan site in IAR (1976-77:19). However, the current exploration at the site did not yield any cultural evidence associated with the Harappan period.

The sites of Nadi and Premachak Tibba, on the other hand, have provided cultural material with Harappan affinities during the current exploration, but the amount of material collected is insufficient to make a conclusive judgement about a larger Harappan population in the region.

### V.1.1 Pottery from Period I

From the excavation of Manda (1976-77: 21), however, jars with thick band on neck and shoulder along with rusticated ware found. The red ware of both plain and painted variety includes vessels like jars, dishes, dishes on stand, beakers, and goblets. Few sherds of grey ware were also found from the excavation.

The few pottery sherds found from the exploratory context is of red ware of the unslipped variety (Fig. V.2, V.3 and Table V.1).



Figure V.2: Explored Harappan sherds from the site of Premachak Tibba and Nadi

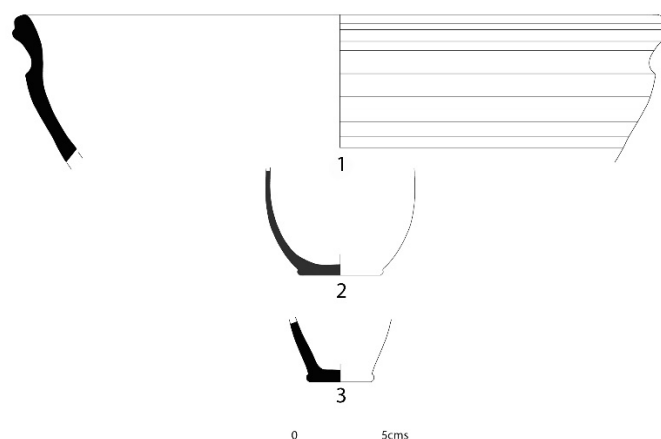


Figure V.3: Pottery vessels of Period I

**Table V.1- Description of the sherds belonging to Period I**  
**■Explored by researcher**

Sr. No.	Site	Description of the sherd	Comparable site
1	■Premachak	Unslipped fragment of a basin Outturned rounded rim with an external ridge and wide groove Red ware, well baked fine pottery Core color- 10R6/3- Pale red	Farmana- Fig. 6.32 type 2, phase 4 (Shinde et al., 2011)
2	■Premachak	Fragment of a tumbler Non continuous disc base with a convex body Red ware, well baked fine pottery Core colour-10R5/6- Red Wash colour-10R5/6- Red	Farmana- Fig. 6.87 No. 565 (Shinde et al., 2011)
3	■Nadi	Unslipped fragment of a goblet Non continuous disc base with a straight body Red ware, well baked fine pottery Surface color- 10R6/6- Light red	Kunghar Fig. 17, No. 6 (Dangi, 2010)

## **V.2 Period II**

Material assemblages belonging to this period include – the artefacts collected from 17 sites in the current exploratory surveys, and those collected from the systematic section scraping carried out at two sites: Biyan Tibba and Satowali. As mentioned above, due importance is given to the artefacts from these two sites as it helped to cross check the cultural context of artefacts collected from other sites. The site, Biyan Tibba among the two, incorporated the three main Historic period's (Period II, III and IV) artefacts in stratigraphic context.

Whereas the site of Satowali has revealed artefacts of only two periods, Periods II and IV, in the section scraping. The Period III occupation is missing from the stratigraphy, but the surface exploration at the site gave evidence of Period III. Details of artefact remains from these two sites along with those from the explored sites are described below.

### **V.2.1 Cultural material from scraped sections**

#### **V.2.1.1 Section scraping at Biyan Tibba**

Layer 8 and 7 (280-200 cm) (see Chapter IV, section IV.2.2.1 for layer description) constituted **Period II** of the site. The pottery belonging to this period can be placed to 'Pre-Kushana pottery' reported from the site at Ambaran (IAR 2000-01). The amount of pottery recovered, however, is limited, due to the space constraints of section scraping. Most pottery from this period belongs to the plain red ware type with common vessels being bowls followed by jars and pots of varied rim features e.g., simple straight tapered rims, incurved rims, everted rounded rims etc. (see table V.2 for sherd description). Decoration on some sherds include incised lines and some of the sherds belong to corrugated ware category (Fig. V.4). Some of the terracotta pieces collected from this period, revealed impression of food grains (rice) on them (Fig. V.5).

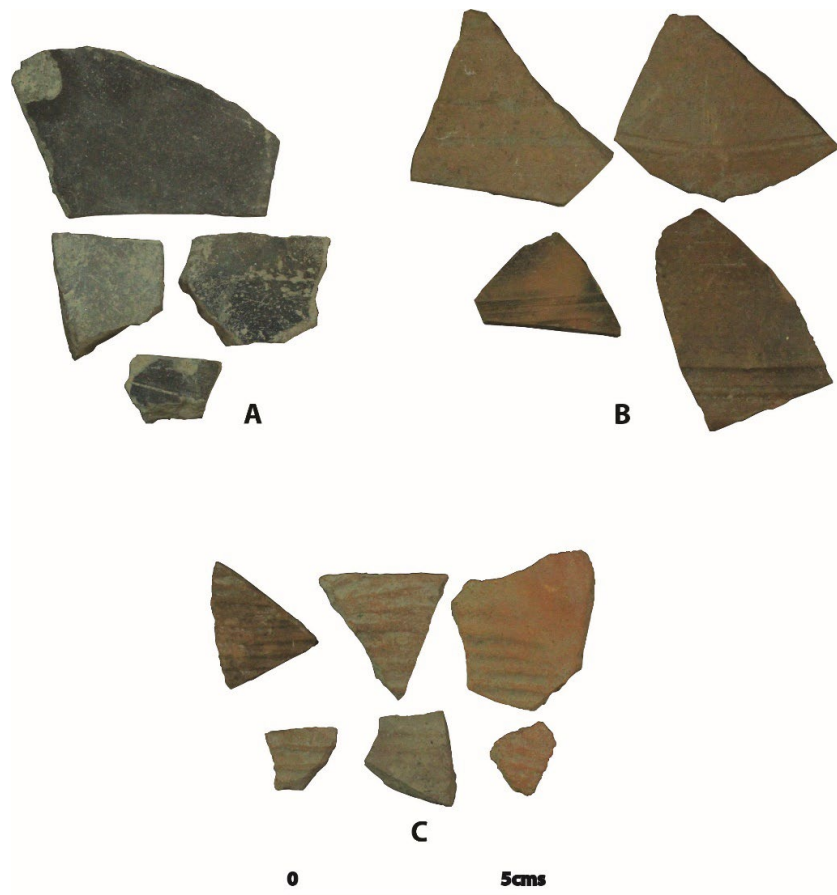


Figure V.4: A – Grey ware sherds; B – Incised ware; C – Corrugated ware of Period II

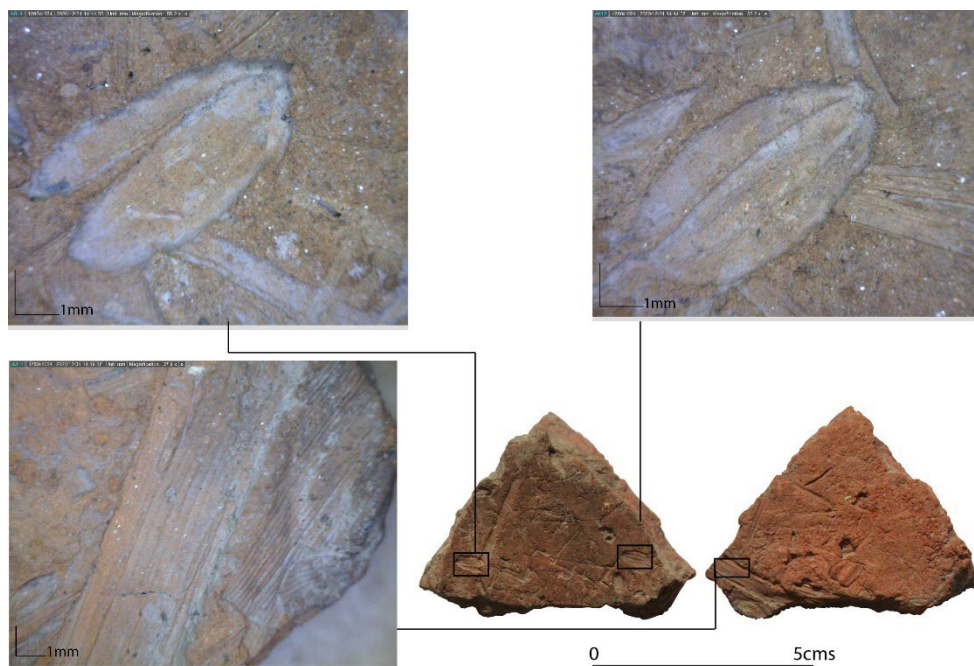


Figure V.5: Terracotta piece with grain impression (rice) belonging to Period II

#### V.2.1.2 Section scraping at Satowali

The layers 6 to 3 form **Period II** (215-100 cm) of the site. This Period is comparable to the Period II of Biyan Tibba. As already discussed, the pottery of this period can be placed in the Pre-Kushana pottery repertoire (IAR 2000-01). A charcoal sample obtained from the scraped section provided a radiocarbon date of a time bracket of 4<sup>th</sup> century BCE to 3<sup>rd</sup> century BCE (2 $\sigma$  317 BC-208 BC). Plain red ware is dominant during this period. Small and medium sized convex bowls (Fig. V.6) or straight sided bowls with simple straight tapered rim and large, wide mouthed ones with incurved beaked rim are common in this period. Other vessel forms include medium sized jars with simple everted slightly curved, rounded rim etc (see table V.2 for sherd description). Antiquities in the form of worked potsherds, broken terracotta beads and bangles were recovered from this period (Fig. V.7 and V.8). In addition, terracotta pieces with plant impression were also retrieved from this period (Fig. V.9).



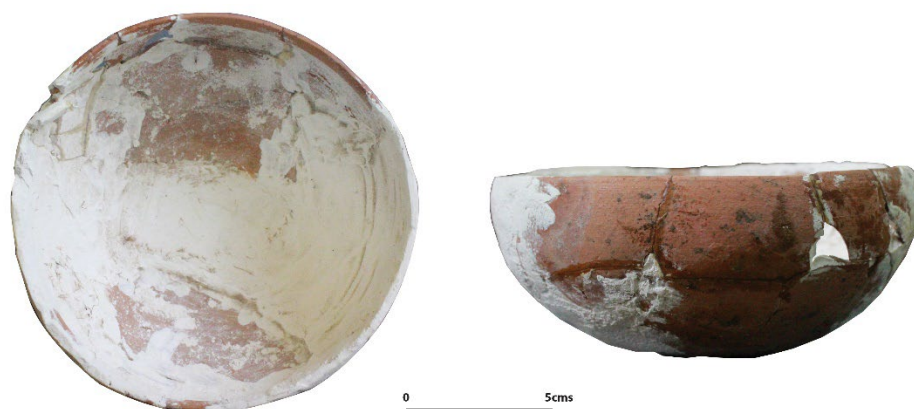


Figure V.6: Reconstructed bowl of Period II from Satowali



Figure V.7: Worked pottery pieces  
and broken terracotta bead from Period II

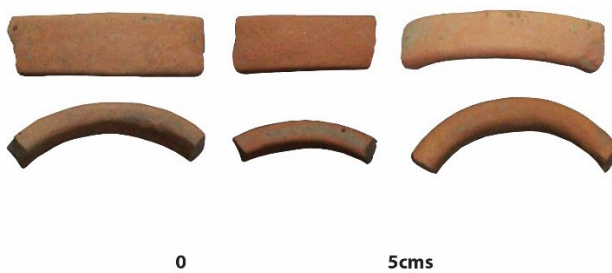


Figure V.8: Terracotta bangle pieces of Period II

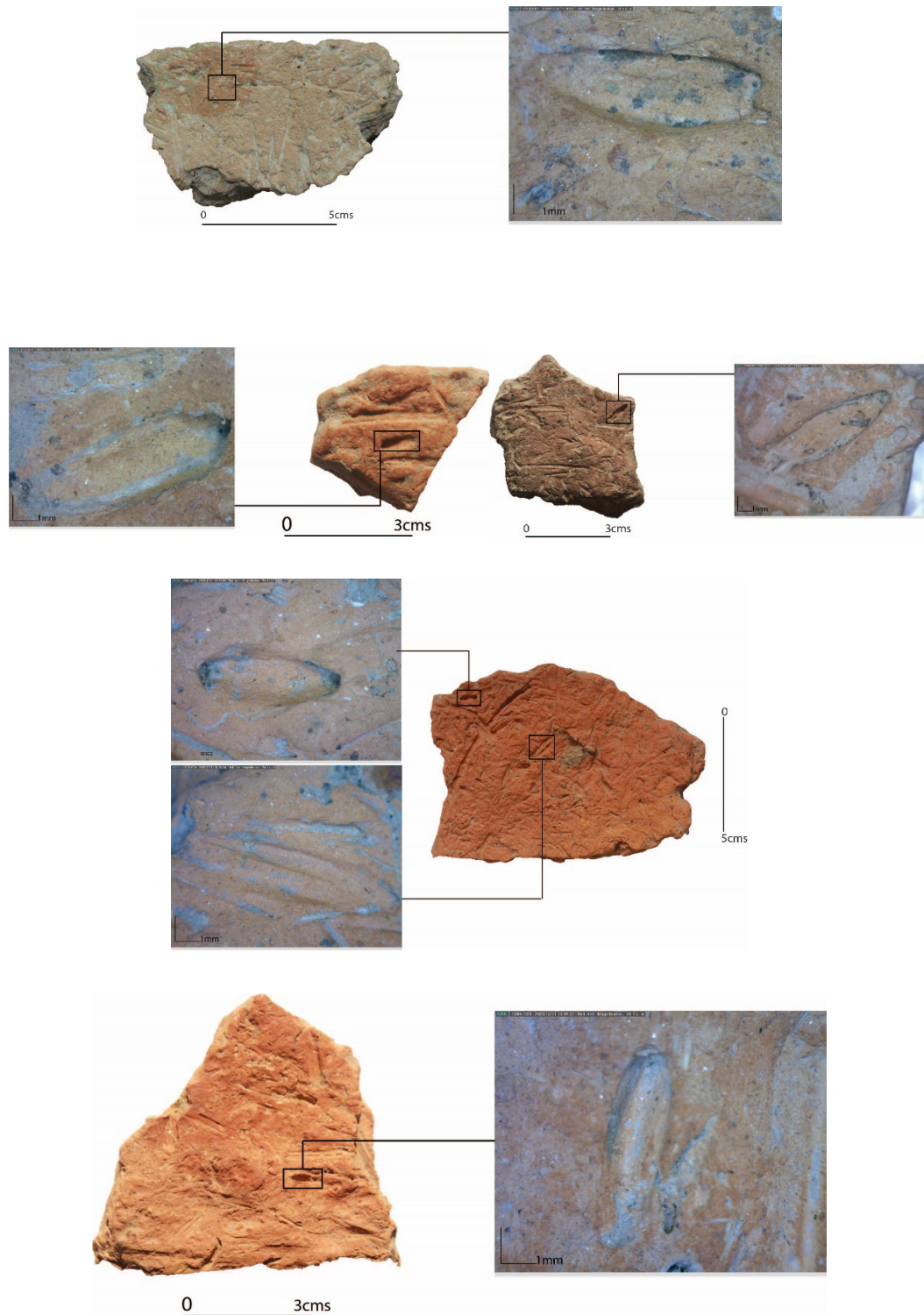


Figure V.9: Terracotta pieces with grain impression (rice) belonging to Period II

### V.2.2 Material culture from other explored sites

Apart from the material culture obtained from the scraped section, exploration from the sites also yielded artifacts that could be attributed to Period II. The site of Satowali from explored context provided evidence of grey ware pottery with incised pattern in the form of vertical lines and circles (Fig. V.10 A), parallel to the latter is found from the site of Hastinapur (Lal, 1954-55: Plate XXV, No. 4; Fig. 9 No. 45). The terracotta figurine (Fig. V.10 B) has close parallel from Sirkap (Ghosh, 1948: Plate 132, No. 2)



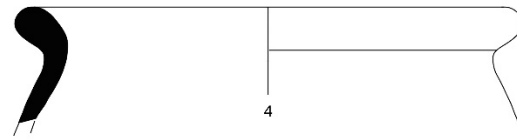
Figure V.10: A – Incised grey ware (Satowali) B – Fragment of a terracotta figurine with applique design (Dohana Chak Tibba) belonging to Period II

### V.2.3 Pottery from Period II

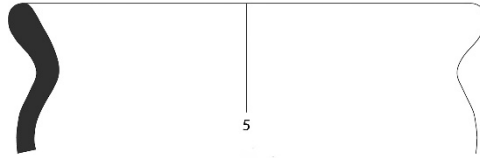
The excavated sites of Manda, Ambaran, Guru Baba ka Tibba and Tibba Name Shah have given evidence of Period II in the area. The site of Manda had dishes, bowls, handis with featureless rim and miniature pots (IAR 1976-77:21) as representative pottery of this period. The site of Ambaran gave evidence of only few pieces of grey ware bowls and red ware vases (IAR 1999-00: 58; 2000-01: 48) belonging to this period. The IAR report for Guru Baba ka Tibba (1997-98: 64) mentions just grey ware associated with this period. The site of Tibba

Name Shah gives some detail of the pottery belonging to period I of the site (PGW culture) and period II (Pre-Kushana grey ware) (IAR 2009-10: 69-70). The pottery of Period I is described as wheel made, well fired pottery and sherds with black paintings on grey surface. In addition, other pottery repertoire belonging to PGW period is grey ware, black ware, black and red ware, black on red ware with shapes like bowls, dishes of medium fabric. The pottery of “Pre-Kushana/Grey ware” period is grey ware and red ware with shapes like dishes, bowls, lids, vases, and miniature pots.

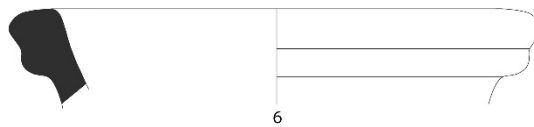
The explored pottery of Period II mostly is of plain red ware of both slipped and unslipped variety of mostly fine fabric, but a few sherds of coarse fabric as well. In addition to red ware, a few grey ware sherds are also encountered. The common shapes found are small and medium sized bowls with vertical and in-turned rims, small and medium sized vases/jars, and small pots (Fig. V.11-V.15, Table V.2). A representative chart comprising of selected comparable pottery belonging to Period II from different sites and Jammu is depicted in Figure V.15a.



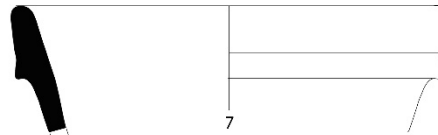
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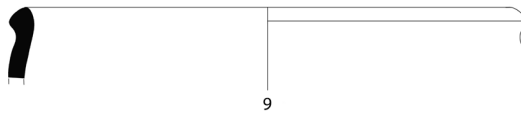


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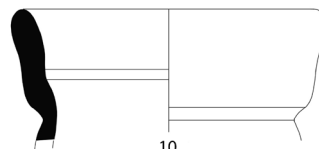


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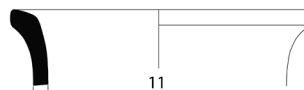
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Figure V.11: Pottery vessels of Period II

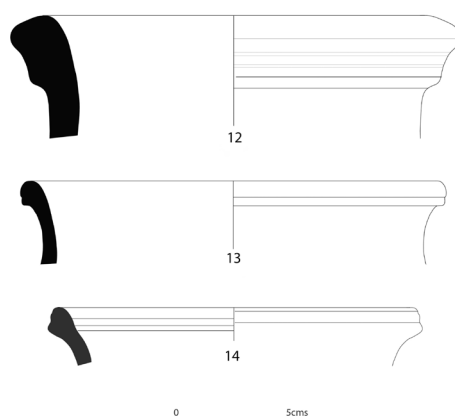


Figure V.11a: Pottery vessels of Period II

**Table V.2- Description of the sherds belonging to Period II**  
**★ Section scraping ■ Explored context \* Comparison not found**

Sr. No.	Site	Description	Correspondence
4	★Biyan Tibba	Fragment of a small pot Outturned rounded rim with convex sides. Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color -10R5/3- Weak red. Slipped only from outside	Aktha: Fig. 31 No. 39 (Jayaswal, 2009) See fig. V.15a - a
5	■Deoli Tibba	Unslipped fragment of a small pot Outturned rounded rim with convex sides. Red ware, well baked fine pottery Core color- 10R6/3- Pale red	Hastinapur: Fig. 11. No. XVIII (Lal, 1954-55) See fig. V.15a-b
6	★Biyan Tibba	Unslipped fragment of a medium vase/jar Thick, collared, flaring rim with a flattened top and an external ridge Red ware, ill baked crude pottery Core color- 10R6/4- Pale red	Hulas: Fig. 21 No. 6 (Dikshit, n.d) See fig. V.15a-c
7	★Biyan Tibba	Unslipped fragment of a medium vase/jar Outturned rounded rim with an external ridge Red ware, well baked fine pottery Core color- 10R6/6-Light red	Tilaura-Kot: Fig. 18 No. CXXXIIIf (Mitra, 1972)  Khairadih: Fig. 36 No. 22 (Singh & Rai, 2014) See fig. V.15a-d
8	★Biyan Tibba	Fragment of a small vase/jar Almost vertical rim with flattened top, small external ridge, and concave neck. Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip colour-10R6/4- Pale red- slipped only on the outside	Ganwaria: Fig. 49 No. 7 (Srivastava, 1996)
9	★Satowali	Unslipped fragment of a medium vase/jar Slightly outturned, externally thickened, and beveled rim and convex sides. Red ware, well baked medium fabric pottery Core color- 10R6/6- Light red	Kausambi: Fig. 20 No. 41 (Sharma, 1969) See fig. V.15a-e

Sr. No.	Site	Description	Correspondence
10	★ Satowali	Unslipped fragment of small vase/jar Slightly outturned rounded rim with shallow groove on the inside above the constricted neck. Red ware, well baked fine pottery Core color- 10R6/4- Pale red	Variant Prahladpur: Fig. 11 No. T2G (Narain & Roy, 1968)
11	★ Satowali	Fragment of a small vase/jar Outturned, internally beveled rim with a quadrangular profile. Red ware, well baked medium fabric pottery Core color- 10R6/4- Pale red Slip color-10R5/4- Weak red- slipped all over	Variant Prahladpur: Fig. 11 No. T2D (Narain & Roy, 1968)
12	▪ Baba Potho	Unslipped fragment of a medium vase/jar- Outturned, externally thickened collared rim with an external ridge. Red ware, ill baked crude pottery Core color- 10R6/6- Light red A lot of inclusion- mica and sand particles visible on the surface.	Variant Guru Baba Ka Tibba: Fig. 17 No 4 IAR 1997-98
13	▪ Nadi	Fragment of a medium vase/jar Outturned, thick and rounded rim with an external ridge and concave neck Red ware, well baked fine pottery Core colour-10R6/6-Light red Slip color- 10R6/4- Pale red- slipped all over	Hulas: Fig. 20 No. 33 (PGW associated) (Dikshit, n.d)
14	▪ Muggoali/Bla Tibba	Fragment of a medium vase/jar Straight, rounded rim with an external ridge and constricted neck. Grey ware, well baked fine pottery Core color- 2.5YR N4/0- Dark grey Slip color- 2.5YR N4/0- Dark grey- Slipped only on the outside	Variant Hastinapur: Fig. 11. No. XII (Lal, 1954-55)

★ Section scraping ▪ Explored context \* Comparison not found

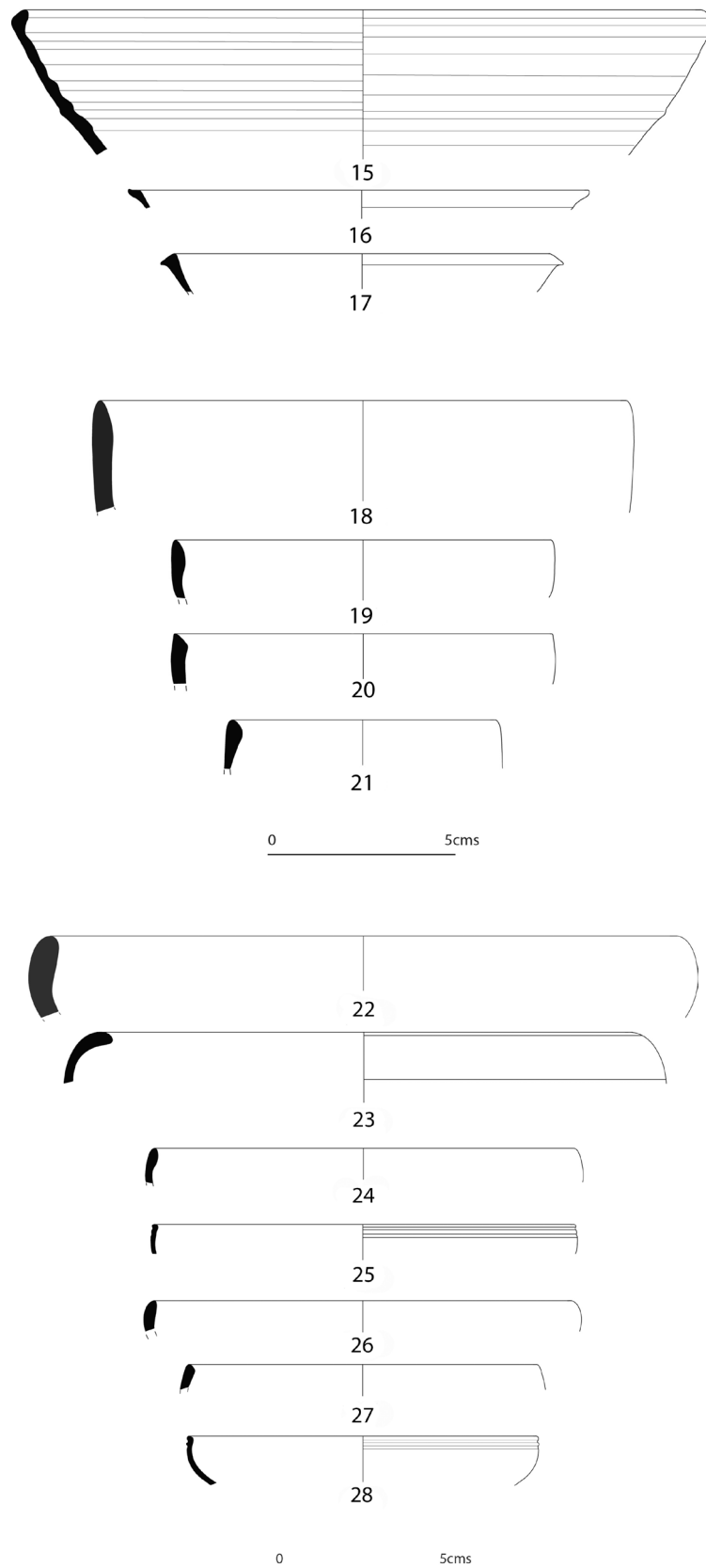


Figure V.12: Pottery vessels of Period II



**★ Section scraping ■ Explored context \* Comparison not found**

Sr. No.	Site	Description	Correspondence
15	★Biyan Tibba	Unslipped fragment of a medium bowl In-turned, externally beveled rim. Red ware, well baked fine pottery Core color- 10R6/6- Light red	Ropar: Fig. 6 No. 5 (Sharma, 1953) See fig. V.15a-f
16	★Biyan Tibba	Fragment of a small bowl Horizontally oriented, flat rim. Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R6/4-Pale red- slipped all over	*
17	★Biyan Tibba	Unslipped fragment of a small bowl Thick, externally beveled rim with a flange. Red ware, well baked fine pottery Core color- 10R6/3-Pale red	*
18	★Biyan Tibba	Fragment of a small straight sided bowl Vertical internally slightly thickened rim Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R5/6- red- slipped all over	Rajghat: Fig. 6 No. 49 (Narain & Roy, 1977)
19	★Biyan Tibba	Unslipped, small convex sided bowl Vertical, internally thick and beveled rim. Red ware, well baked fine pottery Core color- 10R6/6- Light red	Prahladpur: Fig. 7 No. T4E (Narain & Roy, 1968)
20	★Biyan Tibba	Fragment of a small convex sided bowl Slightly incurved, internally beveled sharp rim. Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R5/6- red- slipped all over	Variant Prahladpur: Fig. 7 No. T5H (Narain & Roy, 1968)
21	★Biyan Tibba	Fragment of a small convex sided bowl Slightly in-turned, internally thickened rounded rim Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R5/6- red- slipped all over	Atranjikhera: Fig. 90 No.22 (Gaur, 1983) See fig. V.15a-g

**★ Section scraping ■ Explored context \* Comparison not found**

Sr. No.	Site	Description	Correspondence
22	★Biyan Tibba	Fragment of a medium bowl In-turned rounded rim with convex sides Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R6/4- Pale red- slipped all over	Vaisali: Fig. 8 No. 8 (Deva & Mishra, 1961)
23	★Biyan Tibba	Unslipped fragment of a hemispherical medium bowl. Incurved, thick, rounded rim Red ware, well baked fine pottery Core color- 10R6/6- Light red	Variant Tilaura-Kot: Fig. 9, No. XLVf (Mitra, 1972)
24	★Biyan Tibba	Fragment of a small convex sided bowl In-turned, internally thickened rim Red ware, well baked fine pottery Core color- 10R6/1- Reddish grey Slip color- 10R5/1- reddish grey- slipped all over	Tilaura-Kot: Fig. 8 No. XXVIId (Mitra, 1972)
25	★Biyan Tibba	Fragment of a small convex bowl In-turned rounded rim with grooved exterior Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R6/4 Pale red-slipped all over	Tilaura-Kot: Fig. 4 No. IIIc (Mitra, 1972)
26	★Biyan Tibba	Fragment of a small convex bowl In-turned, tapering rim Red ware, well baked fine pottery Core color- 10R6/8- Light red Slip colour-10R6/6- light red- slipped all over	Hulas: Fig. 22 No. 16 (Dikshit, n.d) See fig. V.15a-h
27	★Biyan Tibba	Fragment of a small convex bowl In-turned, internally beveled rim. Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R5/6- red- slipped all over	Prahladpur: Fig. 7 No. T5H (Narain & Roy, 1968)
28	★Biyan Tibba	Fragment of a small straight sided bowl Vertical, internally rounded rim with an external ridge and grooves Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color-10R6/4- Pale red- slipped all over	Tulamba Fig. 18 No. 3 (Mughal, 1967)

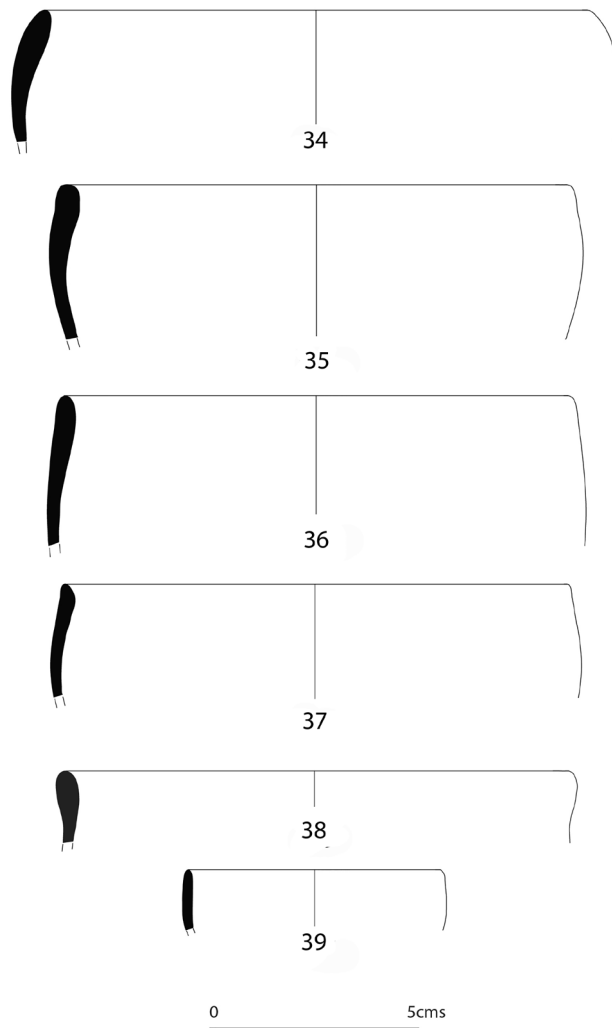
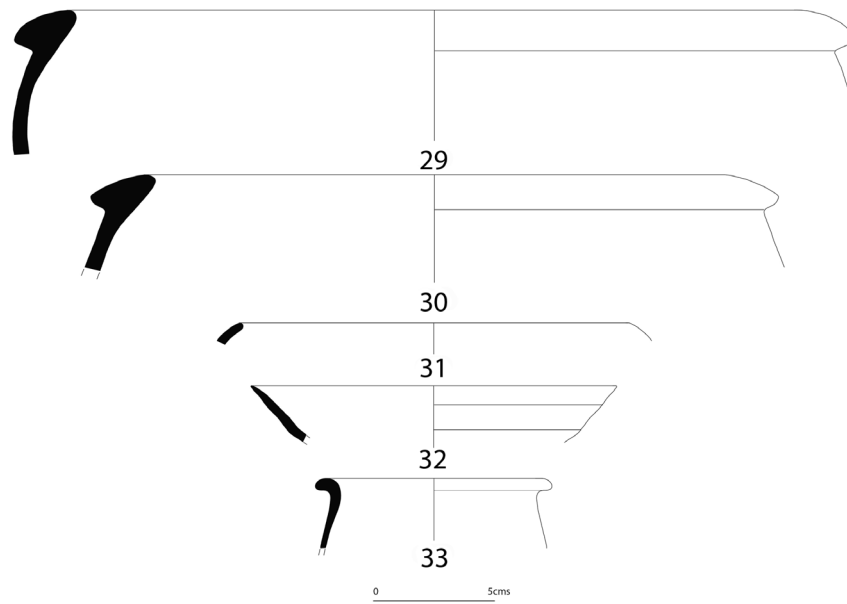


Figure V.13: Pottery vessels of Period II

★ Section scraping ■ Explored context \* Comparison not found

Sr. No.	Site	Description	Correspondence
29	★Satowali	Unslipped fragment of a large globular basin In-turned, externally thick, flanged collared rim Red ware, well baked fine pottery Core color- 10R6/6- Light red	Atranjikhra: Fig. 89 No. BN 10 (Gaur, 1983) See fig. V.15a-i
30	★Satowali	Unslipped fragment of a large globular basin In-turned, externally thick, flanged/collared rim Red ware, well baked fine pottery Core color- 10R6/6- Light red	Ganwaria: Fig. 49 No. 14 (Srivastava, 1996)
31	★Satowali	Fragment of a medium convex bowl In-turned, rounded rim Core color- 10R6/8- Light red Red ware, well baked fine pottery Slip color-10R6/4- Pale red- slipped only on the outside	Variant Hulas: Fig. 24 No. 1 (Dikshit, n.d)
32	★Satowali	Unslipped fragment of a small conical bowl sharp tapered rim Red ware, well baked fine pottery Core color- 10R6/6- Light red	Variant Tilaura-Kot: Fig. 6, no. XIII (Mitra, 1972)
33	★Satowali	Unslipped fragment of a small/miniature bowl Horizontally turned-out, slightly drooping rounded rim Red ware, well baked fine pottery Core color- 10R6/3- Pale red	Atranjikhra: Fig. 99 No. VR-4 (Gaur, 1983)
34	★Satowali	Fragment of a small convex bowl Incurved, internally thickened featureless rim Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip colour-10R5/6- red- slipped all over	Tilaura-Kot: Fig. 8 No. XXVIId (Mitra, 1972)
35	★Satowali	Unslipped fragment of a small convex bowl Internally thick, up-turned rounded rim. Red ware, well baked fine pottery Core color- 10R6/6- Light red	Guru Baba Ka Tibba: Fig. 16 No. 22 IAR 1997-98 See fig. V.15a-j
36	★Satowali	Unslipped fragment of a small convex bowl Vertical, internally thick, rounded rim Red ware, well baked fine pottery Core- 10R6/3- Pale red	Variant Khairadih: Fig. 34 No. 3A (Singh & Rai, 2014)
37	★Satowali	Unslipped fragment of a small convex bowl Internally beveled rim. Red ware, well baked fine pottery Core- 10R6/6- Light red	Prahladpur: Fig. 7 No. T4E (Narain & Roy, 1968)

38	★Satowali	Unslipped fragment of a small straight sided bowl Vertical, thick, rounded rim Red ware, well baked fine pottery Core- 10R6/3- Pale red	Variant Kopia- Plate 23a, No. 3 (Kanungo et al., 2013) See fig. V.15a-k
39	★Satowali	Unslipped fragment of a small straight sided bowl Vertical, featureless rim. Red ware, well baked fine pottery Core- 10R6/6- Light red	Guru Baba Ka Tibba: Fig. 16 No. 19 IAR 1997-98

★ Section scraping ■ Explored context \* Comparison not found

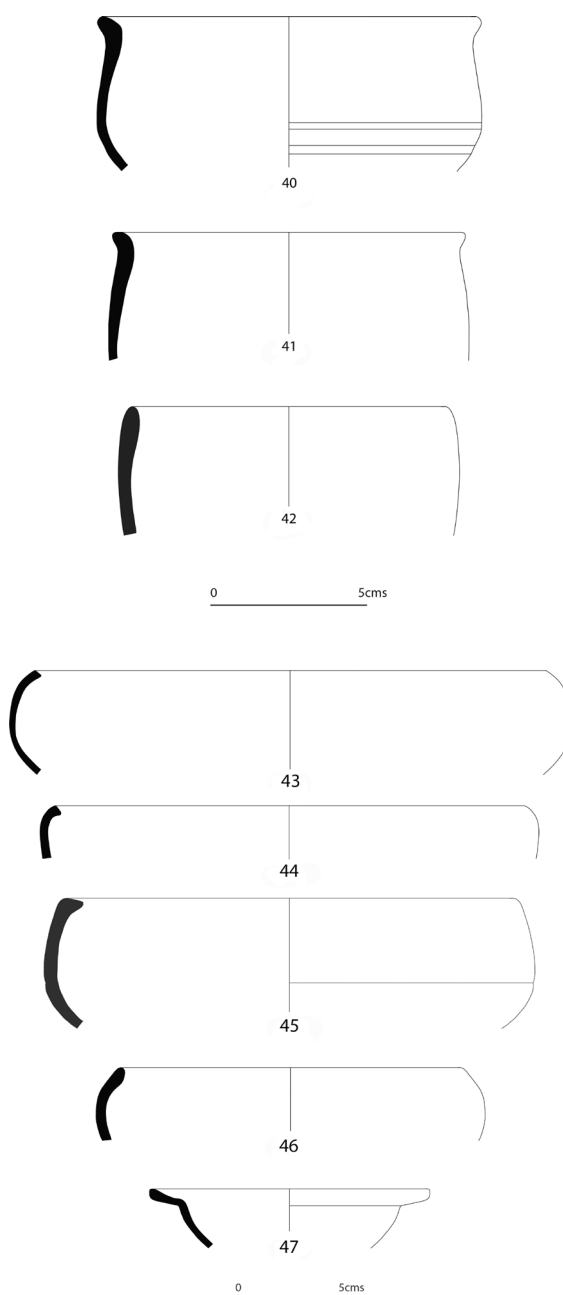


Figure V.14: Pottery vessels of Period II

★ Section scraping ■ Explored context \* Comparison not found

Sr. No.	Site	Description	Correspondence
40	■ Kalali	Fragment of a small convex bowl Short outturned, internally beveled rim Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R6/8- light red- slipped all over	Hulas- Fig. 24 No. 32 (Dikshit, n.d)
41	■ Kalali	Fragment of a small convex bowl Short outturned rounded rim Red ware, well baked fine pottery Core colour-10R6/6- Light red Slip colour-10R6/4- pale red slipped all over	Khairadih: Fig. 32, No. 1c (Singh & Rai, 2014)
42	■ Muggoali/Bla Tibba	Unslipped fragment of a small convex bowl In-turned, slightly thick, rounded rim. Red ware, well baked fine pottery Core color- 10R6/4- Pale red	Variant Guru Baba Ka Tibba Fig. 16. No.23 IAR 1997-98 See fig. V.15a-l
43	■ Mana Tibba	Fragment of a large convex, shallow bowl In-turned, internally beveled rim and convex sides. Red ware, well baked fine pottery Core color-10R6/6- Light red Slip color- 10R5/6- red- slipped all over The surface of the pottery is smooth and polished on the outside	Variant- Tilaura-Kot: Fig. 4 No. IId (Mitra, 1972)  Variant- Sravasti: Fig. 16. No. 8 (Sinha, 1967)
44	■ Mana Tibba	Fragment of a large straight sided bowl In-turned, internally beveled rim and straight sides. Red ware, well baked fine pottery Core color- 10R 6/6- Light red Slip color- 10R 5/4-Weak red	Variant- Kausambi: Fig. 10. No. 52 (Sharma, 1960) See fig. V.15a- m
45	■ Kalali	Fragment of a large convex bowl In-turned, internally beveled, flat-top rim with convex sides. Red ware, well baked fine pottery Core color-10R6/6- Light red Slip color-10R6/4- Pale red- slipped all over	Variant Kopia: Plate 7 No. 115 (Kanungo et al., 2013) See fig. V.15a-n
46	■ Kalali	Unslipped fragment of a medium, convex bowl In-turned, internally slightly thickened rim with convex sides Red ware, well baked fine pottery Core color- 10R6/4- Pale red	Variant Ganwaria- Fig. 41, No. 5 (Srivastava, 1996)
47	■ Sai Khurd	Unslipped fragment of a small bowl Obliquely outturned, slightly thick, rounded rim with convex sides Red ware, well baked fine pottery Core colour-10R6/4- Pale red	Variant Hastinapur- Fig. 15 No. X (Lal, 1954-55)

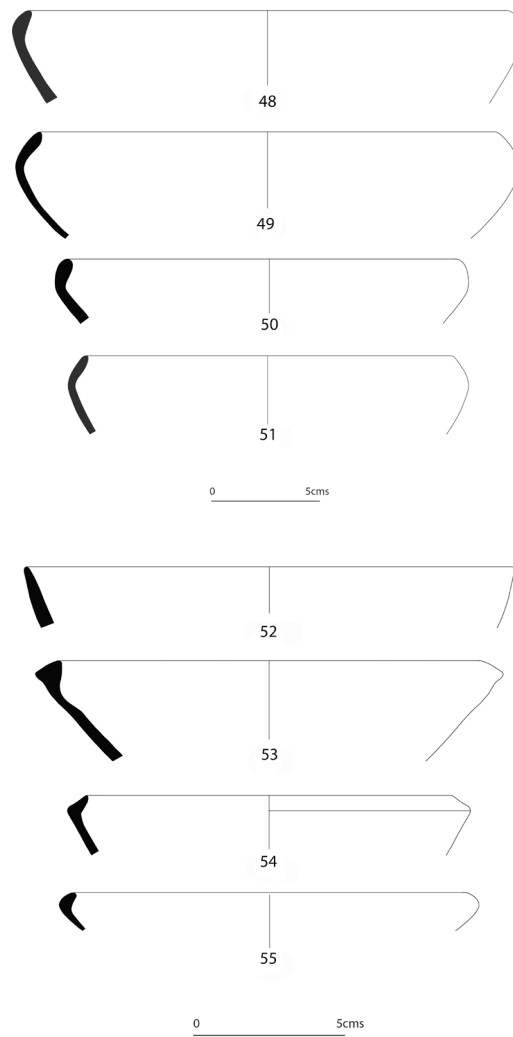


Figure V.15: Pottery vessels of Period II

★ Section scraping ■ Explored context \* Comparison not found

Sr. No.	Site	Description	Correspondence
48	■Dohana Tibba	Fragment of a large conical bowl In-turned, slightly thickened, tapering rim Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color-10R5/4- weak red- slipped all over	Variant Vaisali- Fig. 13 No. 40a (Deva & Mishra ,1961)
49	■Premachak Tibba	Fragment of a large conical bowl In-turned slightly thickened rim Red ware, well baked fine pottery Core color-10R6/8- Light red Slip color- 10R5/3-Weak red- Slipped all over	Variant Atranjikhara: Fig. 87 No. D-24 (Gaur, 1983) See fig. V.15a-o
50	■ Baba Potho	Unslipped fragment of a medium conical bowl In-turned, slightly thick, rounded rim. Red ware, well baked fine pottery Core color- 10R6/6- Light red	Variant Sravasti: Fig. 14 No. II (Sinha, 1967)  Variant Sirkap Fig. 4 No. 10b (Ghosh, 1948)

51	▪ Baba Potho	Unslipped fragment of a medium conical bowl In-turned, featureless rim Red ware, well baked fine pottery Core color- 10R6/6- Light red	Variant Atranjikhhera Fig. 87 No. D-31 (Gaur, 1983) Variant Sirkap Fig. 4 No. 10c (Ghosh, 1948)
52	▪ Baba Potho	Unslipped fragment of a medium conical bowl Tapered rim Grey ware, well baked fine pottery Core color- 2.5YR N3/0- Very dark grey	Sirkap: Fig. 4 No. 9 (Ghosh, 1948)
53	▪ Kalali	Unslipped fragment of a medium, conical bowl Straight, up-turned, externally beveled, thick rim Red ware, well baked fine pottery Core color- 10R6/3- Pale red	Variant Ahichchhatra: Fig. 2 No. 29 (Ghosh & Panigrahi, 1946)
54	▪ Sai Khurd	Unslipped fragment of a small conical bowl In-turned, tapering rim with a sharp carination Red ware, well baked fine pottery Core colour-10R6/6-Light red	Variant Piprahwa: Fig. 31. No. 9 (Srivastava, 1996)
55	▪ Kalali	Unslipped fragment of a small conical bowl In-turned, thick, rounded rim Red ware, well baked fine pottery Core color- 10R 6/3- Pale red	Variant Sravasti Fig. 14. No. III (Sinha, 1967)

★ Section scraping ▪ Explored context \* Comparison not found



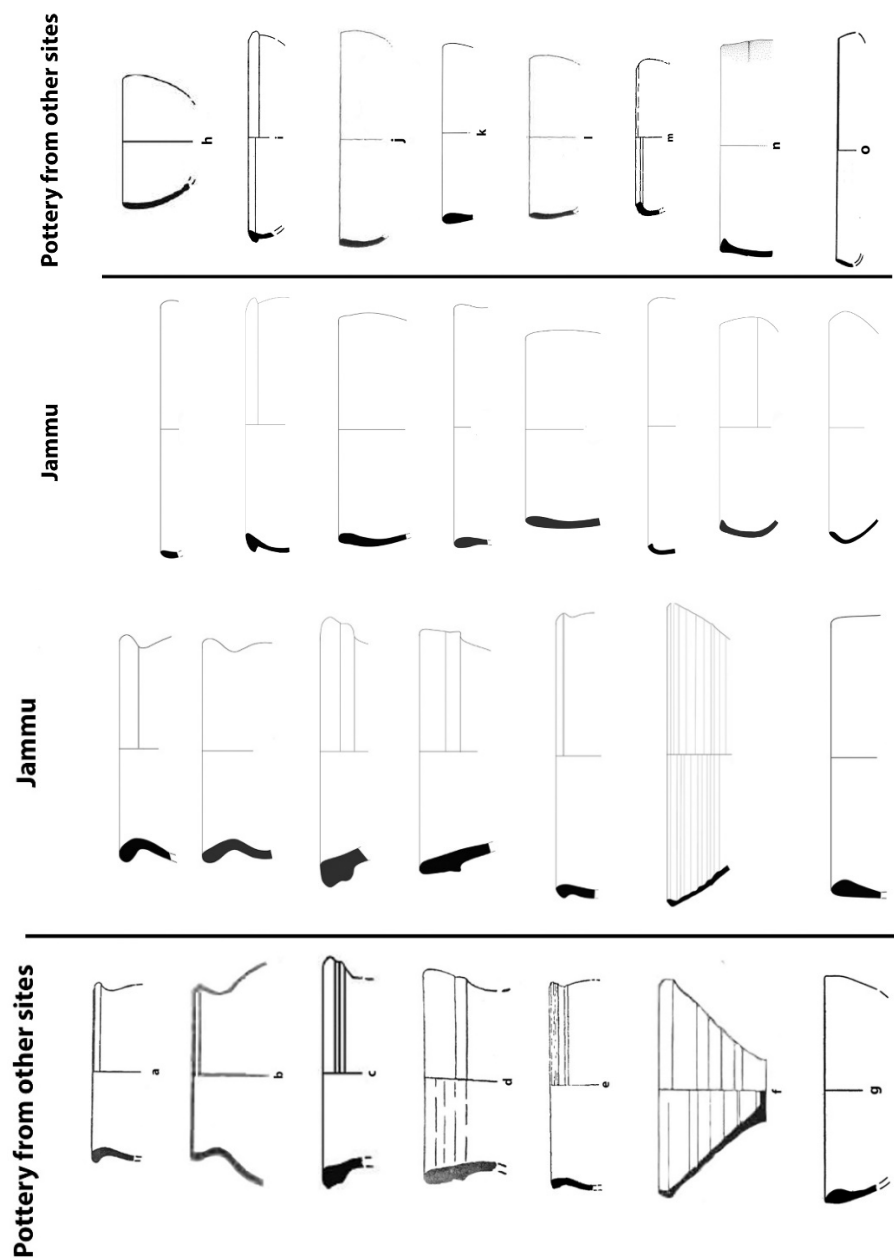


Figure V.15a: Representative comparative pottery from different sites belonging to Period II  
a. Aktha (Jayaswal, 2009); b. Hastinapur (Lal, 1954-44); c. Hulas (Dikshit, n.d); d. Khairadih (Mittra, 1972); e. Kausambi (Sharma, 1969); f. Ropar (Sharma, 1953); g. Atranjikhhera (Gaur, 1983); h. Hulas (Dikshit, n.d); i. Atranjikhhera (Gaur, 1983); j. IAR, 1997-98; k. Kopia (Kanungo et al., 2013); l. IAR, 1997-98; m. Kausambi (Sharma, 1960); n. Kopia (Kanungo et al, 2013); o. Atranjikhhera (Gaur, 1983) (See Fig. V.11- V.15, Table V.2)

The process of spreading of settlements started in this period, as the evidence from the 17 sites suggests. In addition to the pottery, other artifacts from the period throw interesting light on the socio-cultural and economic aspect of the area. The presence of terracotta bangles and bead signify the existence of a local terracotta industry. The incised pattern on grey ware sherds and a terracotta figurine with applique design have shown parallels with sites outside the research area, pointing at the possibility of interregional interactions.

Moreover, the presence of rice grain impressions in the flat terracotta pieces from the sites located in the plains also hints at intra-zonal commodity exchange which is discussed in the next chapter.

### **V.3 Period III**

Cultural material belonging to this period was collected from 37 sites in the current research survey. The section scraping from the site of Biyan, as mentioned in section V.2, gave evidence of this period in stratified context and was of utmost importance in verifying the cultural context of artefacts of Period III from other sites. The detailed description of the artefacts found at the site of Biyan Tibba and other explored sites are provided below.

#### **V.3.1 Cultural material from scraped section**

##### **V.3.1.1 Section scraping at Biyan Tibba**

The above layers 6 to 3 (200- 100 cm) form **Period III** of the site (see Chapter IV, section IV.2.2.1 for layer description). The pottery belongs to the red ware industry with both slipped and unslipped vessels forming component of the pottery repertoire. The common vessel forms from this period are pots, jars and bowls of varying size and rim features. A radiocarbon date was obtained from this period which gave a time bracket of 1<sup>st</sup> century BCE to 1<sup>st</sup> century CE (2054 BC– 27 AD). Pottery vessels in this period were decorated with incised lines and patterns (Fig. V.16 A and B). In addition, an intact terracotta bead and a pot sherd with graffiti were also found (Fig. V.16 C and D). Clay lumps with husk and plant impression were also obtained (Fig.V.16 E). Like the preceding periods, some terracotta pieces were retrieved which revealed impression of food grains (rice) (Fig. V.17)

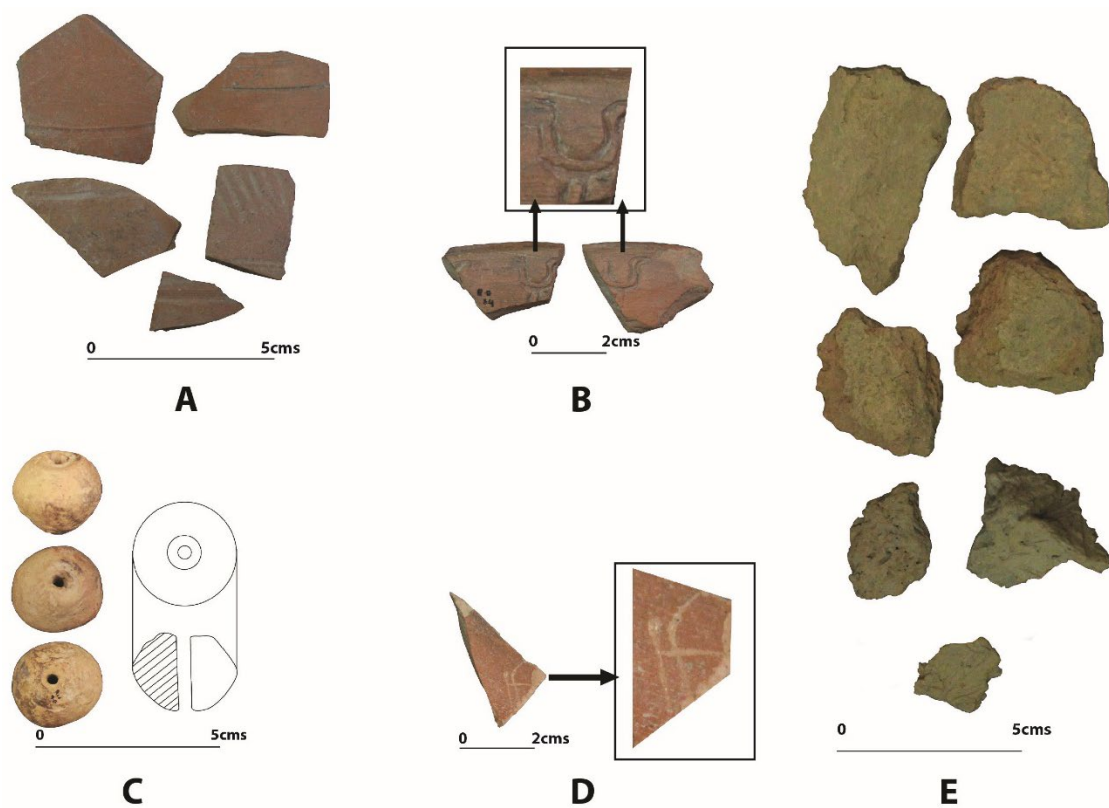


Figure V.16: A – Incised ware B – Incised decorated pattern. C – Intact terracotta bead. D –Pottery with graffiti. E – Clay lumps with reed impression belonging to Period III

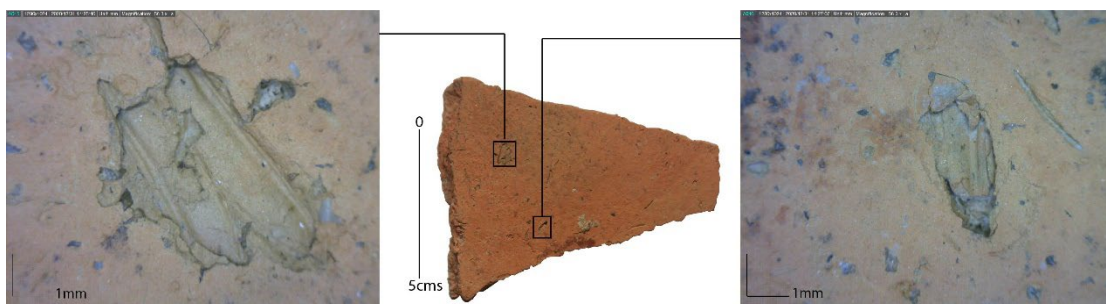


Figure V.17: Terracotta piece with grain impression (rice) belonging to Period III

The site of Satowali did not give evidence of Period III from scraped section.

In addition to the material obtained from the scraped section of Biyan Tibba, important artefact was explored from different sites which could be attributed to Period III.

### V.3.2 Material culture from other explored sites

Terracotta wheel from the site of Mana Tibba (Fig. V.18 A) with incised pattern on the flat side appears to have parallels with the site of Khairadih (Singh and Rai, 2014: Plate XLVII). The stamp ware from Kalali (Fig. V.18 B) have close similarity with decorative patterns found at the site of Sonkh (Hartel, 1993: specimen no. 121,133). The sherd with stamped floral pattern from the site of Ambaran (Fig. V.18 C) appears to be like the pattern of pottery from the site of Rajghat (Narain and Roy, 1977: Plate XIII, No. 36). The fragment of copper vessel from the site of Satowali (Fig. V.18 D; Fig. V.23 No. 155; Table V. 3 No. 110) seems similar to the sherd found at Taxila (Marshall 1951c, plate 174, No. 274).

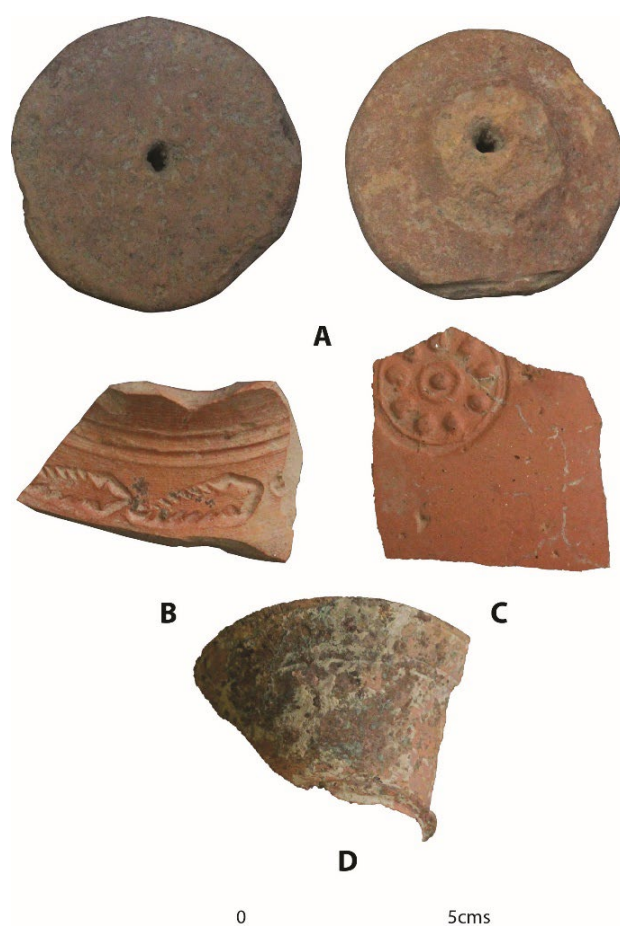


Figure V.18: A – Terracotta wheel (Mana Tibba) B – Stamped ware (Kalali) C – Stamped design (Ambaran) D – Copper vessel (Satowali) belonging to Period III

### V.3.3 Pottery from Period III

The pottery belonging to this period from the excavated site of Manda (IAR 1976-77:21) has been described as decorated pottery with incised and stamped patterns which include both vegetal and floral motifs. Excavation from the site of Ambaran (IAR 2000-00: 68) reveals the incurved bowls of this period. The red ware of Tibba Name Shah, which includes stamp vases, dishes, bowls with incurved rims, basin, spouts, basin with lips, lids, storage jar and miniature pots, are attributed to this period. The miniature pots are decorated with stamped design and geometrical pattern with black painting on the surface (IAR 2009-10: 70).

The current exploration gave evidence of a large number of the sherds in red ware of both slipped and unslipped variety, with majority falling in the latter category. Common shapes include bowls with in-turned rims, vases/jars with thick out-turned rims, pots, lids and ring bases (Fig. V.19 to V.23, Table V.3). The sherds in general are of plain type with some sherds bearing incised decoration primarily floral motifs (Fig. V.18 B and C).

A representative chart comprising of selected comparable pottery belonging to Period III from different sites and Jammu is depicted in Figure V.23a.

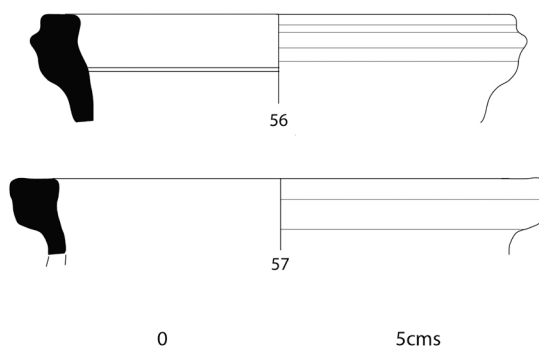


Figure V.19: Pottery vessels of Period III

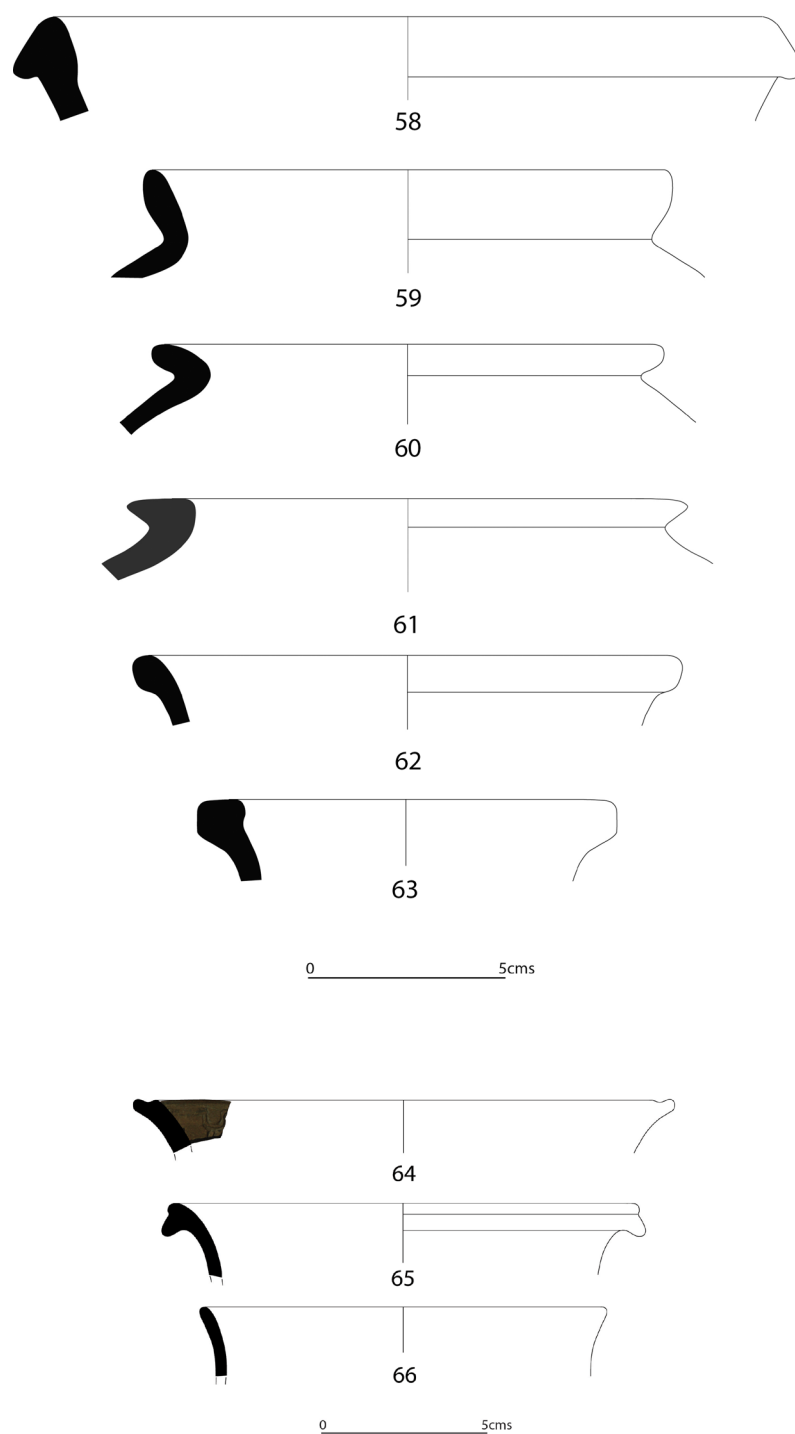


Figure V.19a: Pottery vessels of Period III

**Table V.3- Description of the sherds belonging to Period III**  
**★ Section scraped ■ Explored context \* Comparison not found**

Sr. No.	Site	Description	Correspondence
56	★Biyan Tibba	Fragment of a small pot Thick, flat-top, quadrangular rim with an external ridge and a shallow internal depression over a constricted neck. Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R5/6- red- slipped all over	Variant Ganwaria: Fig. 57, No. 15 (Srivastava, 1996)  See fig. V.23a-a
57	★Biyan Tibba	Fragment of a small pot Thick, flat-top, squarish rim with a shallow internal depression over a constricted neck Red ware, well baked fine pottery Core color-10R6/6-Light red Slip color-10R5/6- red- slipped all over	Variant Sonkh: Page 395 No. IV 9 (Hartel, 1993)  See fig. V.23a-b
58	■Premachak Tibba	Unslipped fragment of a medium pot Vertical, thick, triangular, flanged rim. Red ware, well baked fine pottery Core color- 10R6/6- Light red	Kopia- Plate 1 No. 10 (Kanungo et al., 2013) See fig. V.23a-c
59	■Premachak Tibba	Unslipped fragment of a small pot Slightly out-turned, externally thick rounded rim Red ware, well baked fine pottery Core color-10R6/6- Light red	Variant Sannati- Fig. 21 No. 8 IAR 1997-98
60	■Guru Baba Ka Tibba	Unslipped fragment of small pot Obliquely out-turned, thick, rounded rim with a small, constricted neck. Red ware, well baked fine pottery Core color- 10R6/6- Light red A lot of intrusions in the form of sand particle and mica is visible	Tulamba Fig. 23 No. 5 (Mughal, 1967)  Sannati- Fig. 21 No. 10 IAR 1997-98 See fig. V.23a-d
61	■Nadi	Unslipped fragment of a small pot Horizontally outturned, flat-top externally tapering rim Red ware, well baked fine pottery Core color- 10R6/6- Light red	Variant Tulamba Fig. 22 No. 15 (Mughal, 1967)
62	■Lalyal- Border area	Unslipped fragment of a small pot Out-turned, externally thickened, rounded rim. Red ware, well baked medium fabric pottery Core colour-10R6/6- Light red	Variant Kopia Plate 10 No. 17 (Kanungo et al., 2013) See fig. V.23a-e
63	■Nadi	Unslipped fragment of a small pot Thick, flat-top, squarish rim and constricted neck. Red ware, well baked medium fabric pottery Core colour-10R6/6-Light red	Personal observation Vadnagar Kshtrapa pottery  Personal observation Sanghol Kushana pottery
64	★Biyan Tibba	Fragment of a small vase/jar Out-turned rim with a groove on the top Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color-10R5/6- red- slipped all over	*

		Incised decoration on the internal side (see Fig. V.16 B)	
65	★Biyān Tibbā	Fragment of a small vase/jar Out-turned, externally thickened, beaked rim. Red ware, well baked fine pottery Core color-10R6/6- Light red Slip color-10R5/6 – red- slipped all over	Ganwaria: Fig. 46. No. 13 (Srivastava, 1996) See fig. V.23a-f
66	▪Nadi	Unslipped fragment of a small vase/jar Out-turned featureless rim. Red ware, well baked fine pottery Core color- 10R6/6- Light red	Ganwaria- Fig. 59 No. 16 (Srivastava, 1996) See fig. V.23a-g

★ Section scraping ▪ Explored context \* Comparison not found

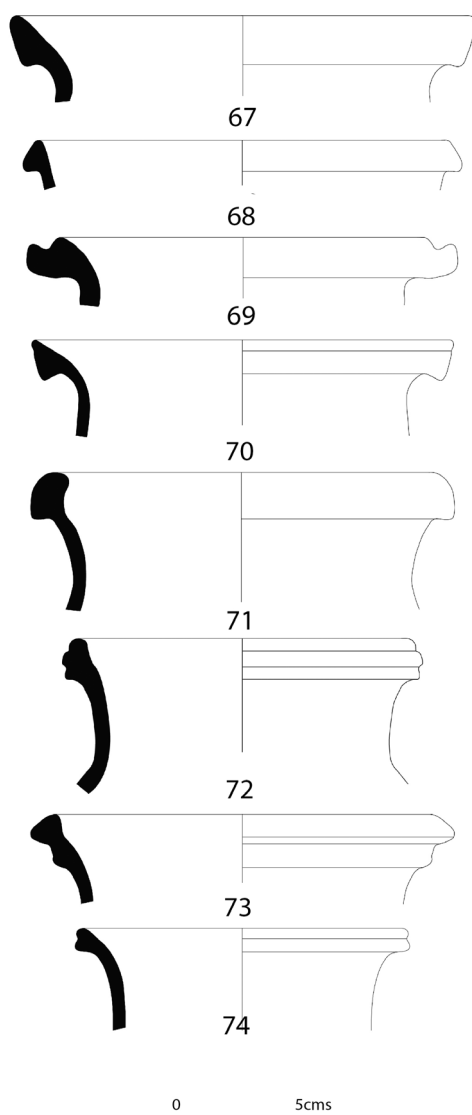


Figure V.20: Pottery vessels of Period III



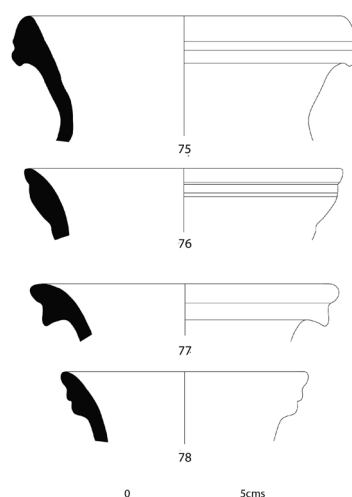


Figure V.20a: Pottery vessels of Period III

★ Section scraping ■ Explored context \* Comparison not found

Sr. No.	Site	Description	Correspondence
67	■Baba Potho	Fragment of a medium vase/jar Out-turned, externally thick, triangular, collared rim. Red ware, well baked medium fabric pottery Core colour-10R6/6- Light red Slip colour-10R 5/4- Weak red- slipped all over	Variant Aktha: Fig. 50 No. 12 (Jayaswal, 2009) See fig. V.23a-h
68	■Satowali	Fragment of a medium vase/jar Vertical, externally thick, triangular, collared rim Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R6/4- Pale red- slipped all over	Variant Tulamba: Fig. 23 No. 19 (Mughal, 1967)
69	■Guru Baba ka Tibba	Fragment of a small vase/jar Outturned, thick, squarish flanged rim Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip Colouour-10R6/4- Pale red- slipped all over	Ganwaria: Fig. 53 No. 15 (Srivastava, 1996) See fig. V.23a-i
70	■Dohana	Fragment of a small vase/jar Obliquely out-turned, externally thick, triangular, collared rim. Red ware, well baked fine pottery Core color- 10R5/4- Weak red Slip color-10R4/3- Weak red slipped all over	Ganwaria: Fig. 54 No. 24 (Srivastava, 1996)  Hulas- Fig. 26 No. 14 (Dikshit, n.d) See fig. V.23a-j
71	■Deoli	Fragment of a small vase/jar Slightly in-turned, externally thick, and collared rim with concave neck. Red ware, well baked fine pottery Core color- 10R6/3- Pale red Slip color-10R5/3- Weak red- slipped all over	Variant Aktha- Fig. 50 No. 13 (Jayaswal, 2009)  Kopia- Plate 1 No. 1 (Kanungo et al., 2013)

			Variant Tilaura-Kot – Fig. 22, No. CLVIIIb (Mitra, 1972)
72	▪Kalali	Unslipped fragment of a small vase/ jar Flanged, vertical, rounded rim with a ridge and concave neck Red ware, well baked fine pottery Core color- 10R6/3- Pale red	Jetavana- Fig. 299 No. RP 5983  (Yoneda, 1997) See fig. V.23a-k
73	▪Deoli	Unslipped fragment of a small vase/jar Out- turned, bilaterally projected rim with an external ridge Red ware, well baked fine pottery Core color- 10R6/6- Light red	Ganwaria- Fig. 51 No. 17 (Srivastava, 1996)
74	▪Manda	Fragment of a small vase/jar Out-turned rounded, externally lipped rim Red ware, well baked fine pottery Core color- 10R6/8- Light red Slip color-10R5/6- red- slipped on the outside.	Variant- Ganwaria Fig. 59 No. 7 (Srivastava, 1996)
75	▪Abduleyan	Fragment of a small vase/jar Obliquely outturned, thick, triangular flanged rim Core color- 10R6/3- Pale red Red ware, well baked fine pottery Slip color-10R5/3- Weak red- slipped all over	Ganwaria Fig. 59 No. 11 (Srivastava, 1996)
76	▪Mana Tibba	Fragment of a small vase/jar Out-turned rounded, externally thickened rim with grooves on the external side Red ware, well baked fine pottery Core color- 10R6/4- Pale red Slip color-10R5/2-Weak red- slipped all over	Hastinapur- Fig. 21. No. XXXVIII (Lal, 1954-55)
77	▪Baba Potho	Fragment of a small vase/jar Out-turned, externally thick, flanged rim Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color-10R5/4- Weak red- slipped all over	Ganwaria- Fig. 53. No. 9 (Srivastava, 1996) See fig. V.23a-l
78	▪Lower Kalyanpur Tibba	Unslipped fragment of a small vase/jar Out-turned rounded rim with two ridges on the external side. Red ware, well baked fine pottery Core color- 10R6/6- Light red	Variant Kopia- Pl. 11 No. 30 (Kanungo et al., 2013)

★ Section scraping ▪ Explored context \* Comparison not found

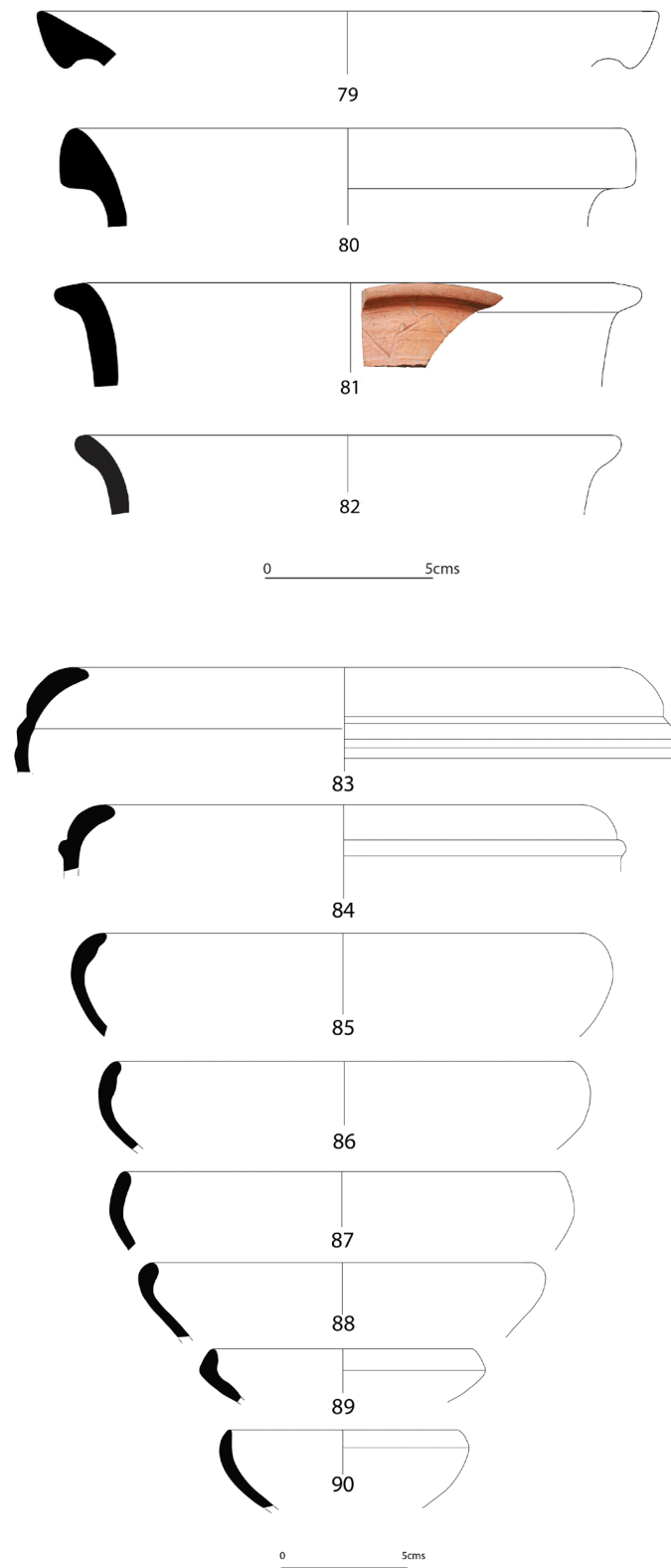


Figure V.21: Pottery vessels of Period III

**★ Section scraping ■ Explored context \* Comparison not found**

Sr. No.	Site	Description	Correspondence
79	■Satowali	Unslipped fragment of a medium vase/jar Obliquely out-turned, externally thickened, triangular, drooping rim. Red ware, well baked fine pottery Core color- 10R6/3- Pale red	Variant Ganwaria Fig. 54 No. 16 (Srivastava, 1996)
80	■Satowali	Fragment of a medium vase/jar Slightly out-turned externally thickened, triangular collared rim. Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color-10R5/4- Weak red- slipped on the outside	Ganwaria Fig. 51 No. 14 (Srivastava, 1996)
81	■Kalali	Fragment of a medium vase/jar Horizontally turned-out, slightly beveled, flat-top rim and straight neck. Red ware, well baked fine pottery Core color- 10R6/4- Pale red Slip color-10R6/6- Light red- slipped all over Decoration in the form of incised patterns on the external surface.	Variant Aktha Fig. 50. No. 15 (Jayaswal, 2009)
82	■Kalali	Unslipped fragment of a medium vase/jar Outturned, rounded rim with concave neck. Red ware, well baked fine pottery Core color- 10R6/6- Light red	Ganwaria Variant- Fig. 52. No. 26 (Srivastava, 1996)
83	★Biyān Tibba	Fragment of a large convex bowl In-curved, thick rounded rim with external grooves. Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color-10R5/4- Weak red- slipped all over	Personal observation Sanghol- Kushana pottery
84	★Biyān Tibba	Fragment of a medium convex bowl In-turned featureless rim with an external ridge Red ware, well baked fine pottery Core color- 10R6/3- Pale red Slip color-10R6/2- Pale red- slipped all over	Personal observation Sanghol Kushana Pottery
85	★Biyān Tibba	Fragment of a medium conical bowl In-turned, thickened rim with an internal ridge Red ware, well baked fine pottery Core color- 10R6/6-Light red Slip color -10R5/6 – red- slipped all over	*
86	★Biyān Tibba	Fragment of a medium conical bowl In-turned, internally thickened rim with an internal ridge. Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color -10R5/6- red- slipped all over	*

Sr. No.	Site	Description	Correspondence
87	★Biyan Tibba	Unslipped fragment of a medium conical bowl Slightly in-turned, featureless rim. Red ware, well baked fine pottery Core color- 10R6/3- Pale red	Personal observation- Sanghol Kushana Pottery
88	★Biyan Tibba	Unslipped fragment of a medium conical bowl In-turned, thickened, rounded rim. Red ware, well baked fine pottery Core color- 10R6/6- Light red	Sravasti- Fig. 14 No. II (Sinha, 1967) See fig. V.23a-m
89	★Biyan Tibba	Unslipped fragment of a small conical bowl Straight, up turned, tapering rim with a sharp carination. Red ware, well baked fine pottery Core color- 10R6/4- Pale red	Variant Akota – Fig. 15 No. 9b (Subbarao, 1953)
90	★Biyan Tibba	Fragment of a small convex bowl Up-turned, externally tapering rim Red ware, well baked fine pottery Core color- 10R6/6- Light red Wash color- 5YR7/3 – Pink- only on the outside	Ganwaria- Fig. 45 No. 4 (Srivastava, 1996)  Bharadvaja Ashrama- Fig. 14, No. 1** (Lal, 2011)

★ Section scraping ■ Explored context \* Comparison not found \*\* shape also found in Period II

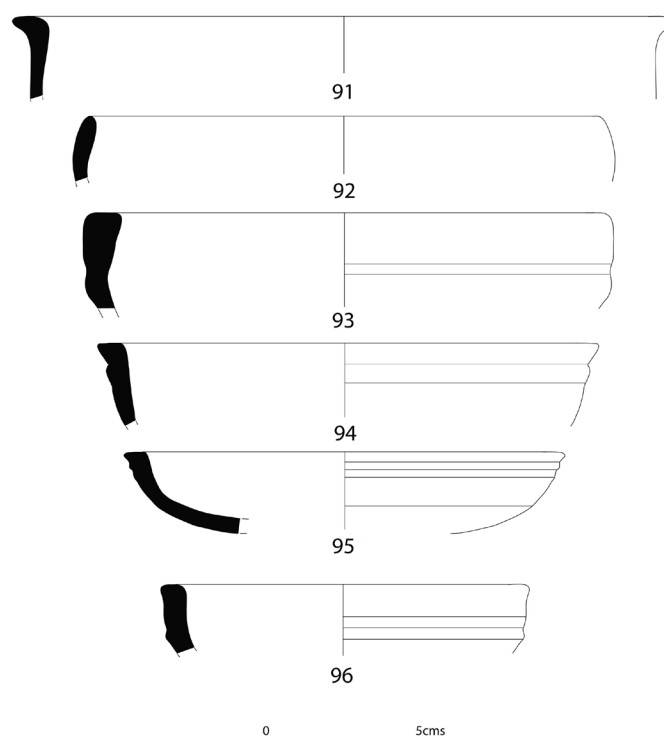


Figure V.22- Pottery vessels of Period III

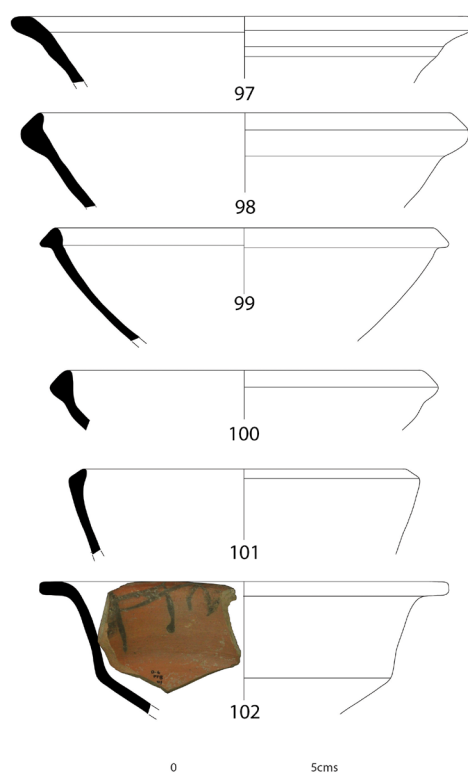


Figure V.22a- Pottery vessels of Period III

★ Section scraping ■ Explored context \* Comparison not found

Sr. No.	Site	Description	Correspondence
91	★Biyan Tibba	Fragment of a medium straight sided bowl Horizontally splayed out, thickened beaked rim. Red ware, well baked fine pottery Core color-10R6/6- Light red Slip color-10R5/6- red- slipped all over	Variant- Ropar: Fig. 6. No. 22 (Sharma, 1953)
92	★Biyan Tibba	Fragment of a small convex bowl In-turned, rounded rim Red ware, well baked fine pottery Core color-10R6/6-Light red Slip color -10R6/4- Pale red- slipped all over	Variant Ganwaria Fig. 62. No. 4 (Srivastava, 1996)
93	★Biyan Tibba	Unslipped fragment of a small conical bowl Straight, internally thickened, flat-top, quadrangular rim with a small external groove Red ware, well baked medium fabric pottery Core color- 5YR7/3- Pink	*
94	★Biyan Tibba	Unslipped fragment of a small conical bowl Slightly outturned, thick, flat-top rim with an external ridge. Red ware, well baked fine pottery Core color-10R6/6-Light red	Tulamba- Fig. 20. No. 17** (Mughal, 1967)
95	★Biyan Tibba	Unslipped fragment of a small, straight sided, shallow bowl	Ganwaria- Fig. 56 No. 5 (Srivastava, 1996) See fig. V.23a-n

		Slightly outturned, thick, flat-top rim with two external small ridges Red ware, well baked fine pottery Core color- 10R6/4- Pale red	Tulamba- Fig. 17 No. 5** (Mughal, 1967)
96	★Biyan Tibba	Fragment of a small straight sided bowl Straight, flat-top rim with an external groove and a ridge Red ware, well baked medium fabric pottery Core color- 10R6/6-Light red Slip color-10R6/4- Pale red- slipped only on the outside	Variant Kopia Plate 16, No. 116 (Kanungo et al., 2013)
97	★Biyan Tibba	Fragment of a small conical bowl Splayed out, flat-top, thick, rounded rim Red ware, well baked fine pottery Core color- 10R6/6-Light red Slip colour-10R5/6- red- slipped all over	*
98	★Biyan Tibba	Unslipped fragment of a small conical bowl Straight, up-turned, externally beveled rim with a prominent ridge below Red ware, medium fabric pottery Core color- 10R6/1- Reddish grey	Jetavana- Fig. 311 No. RP 7194 (Yoneda, 1997) See fig. V.23a-o
99	★Biyan Tibba	Unslipped fragment of a small conical bowl Vertical, externally thick, beveled, triangular rim forming an external ledge. Red ware, well baked fine pottery Core color- 10R6/6- Light red	Variant Sirkap Fig. 4, No.5 (Ghosh, 1948)
100	★Biyan Tibba	Unslipped fragment of a small conical bowl Vertical, externally thickened, beveled, triangular rim forming a ledge. Red ware, well baked fine pottery Core color- 10R6/6- Light red	Personal observation Sanghol Kushana pottery
101	★Biyan Tibba	Unslipped fragment of a small conical bowl In-turned, externally beveled rim Red ware, well baked fine pottery Core color- 10R6/1- Reddish grey	Ropar Fig. 2 No. 1 ** (Sharma, 1953)
102	★Biyan Tibba	Fragment of a small carinated bowl Horizontally splayed out, slightly thickened, flat-top rim Red ware, well baked fine pottery Core color-10R6/6- Light red Slip color-10R5/6- red- slipped all over Painted on the inside with horizontal and vertical lines Painting color-10R4/1- Dark reddish grey	Hastinapur Fig. 20. No. XX (Lal, 1954-55) See fig. V.23a-p

★ Section scraping ■ Explored context \* Comparison not found \*\* shape also found in Period II

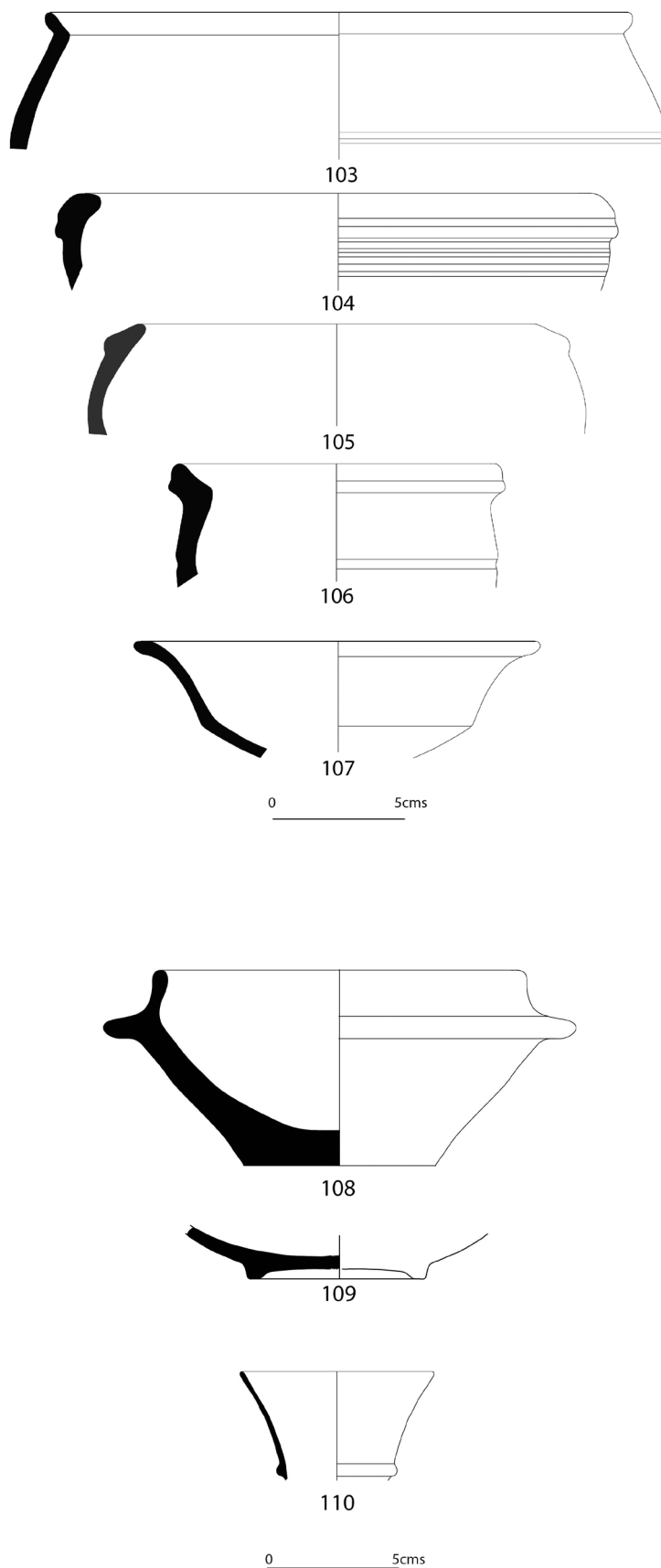


Figure V.23: Pottery vessels of Period III



**★ Section scraping ■ Explored context \* Comparison not found**

Sr. No.	Site	Description	Correspondence
103	■Lalyal-Border area	Unslipped fragment of a globular basin /large bowl Obliquely out-turned, rounded rim with a short neck and bulbous body. Red ware, well baked fine pottery Core color-10R5/6- Red	Personal observation Sanghol- Kushana Pottery
104	■Kalali	Fragment of a medium straight sided bowl In-turned, externally thickened rounded rim with an external ridge. Red ware, well baked fine pottery Core color- 10R6/6-Light red Slip colour-10R5/6- Red- slipped all over	Sirkap- Fig. 6 No. 27b (Ghosh, 1948) See fig. V.23a-q
105	■Nadi	Unslipped fragment of a small spherical bowl In-turned, triangular, collared rim forming an external ridge. Red ware, well baked fine pottery Core color- 10R6/6- Light red	Ganwaria. Fig. 63 No. 3 (Srivastava, 1996)
106	■Lalyal-Border area	Unslipped fragment of a small bowl or miniature pot. Obliquely splayed out, thick rounded rim with an external groove and short neck Red ware, well baked fine pottery Core color- 10R6/6- Light red	Variant Jetavana Fig. 267 No. RP 5277 (Yoneda, 1997)
107	■Baba Potho	Fragment of a small carinated bowl Horizontally splayed out, uniformly thickened rim. Red ware, well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R5/6- red- slipped only on the outside	Variant Hastinapur- Fig. 20. No. XX (Lal, 1954-55)
108	■Satowali	Unslipped intact conical bowl Slightly in-turned, rounded rim with a prominent external flange and flat base Red ware, well baked fine pottery Core color- 10R6/4- Pale red	Variant Jetavana Tab 45, No. RP6001 (Yoneda, 1997)
109	★Satowali	Unslipped fragment of a pot or bowl base. Non continuous vertical sided ring base Red ware, well baked fine pottery Core color- 10R6/4- Pale red	Tissamaharama- Fig. 9, No. b (Schenk, 2007) See fig. V.23a-r
110	★Satowali See Fig. V.18 D	Fragment of a small copper jar Obliquely out curved, rounded rim with a prominent ridge at the constricted neck	Taxila: Plate 174 No. 274 (Marshall, 1951c)

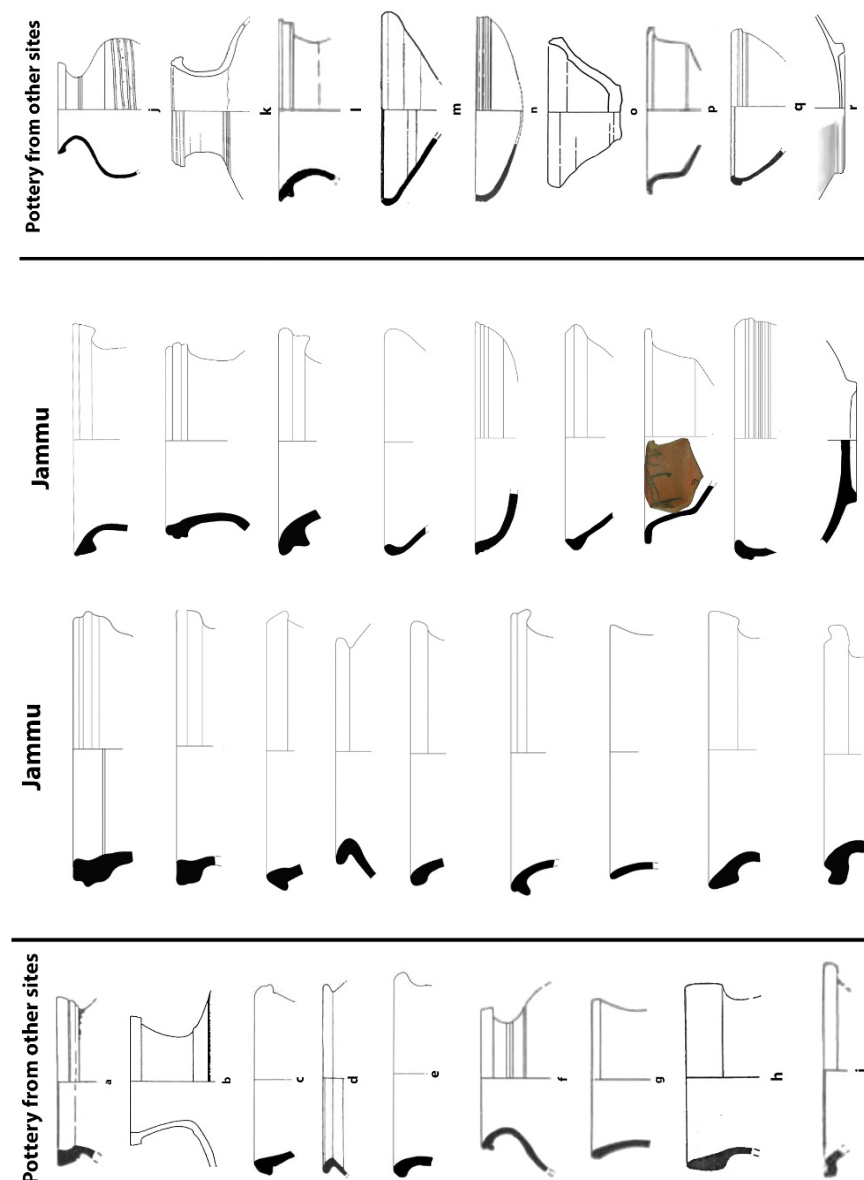


Figure V.23a: Representative comparative pottery from different sites belonging to Period III

a. Ganwaria (Srivastava, 1996); b. Sonkh (Hartel, 1993); c. Kopia (Kanungo et al., 2013); d. Tulamba (Mughal, 1967); e. Kopia (Kanungo et al., 2013); f. Ganwaria (Srivastava, 1996); g. Ganwaria (Srivastava, 1996); h. Aktha (Jayaswal, 2009); i. Ganwaria (Srivastava, 1996); j. Ganwaria (Srivastava, 1996); k. Jetavana (Yoneda, 1997); l. Ganwaria (Srivastava, 1996); m. Sravasti (Sinha, 1967); n. Ganwaria (Srivastava, 1996); o. Jetavana (Yoneda, 1997); p. Hastinapur (Lal, 1954-55); q. Sirkap (Ghosh, 1948); r. Tissamaharama (Schenk, 2007) (see Fig. V.19 to V.23, Table V.3)

Period III witnessed an exponential growth in the number of sites. The local craft industry was active, as is shown by the terracotta beads and terracotta wheel retrieved from sites belonging to this period. The local terracotta art in the area, is part of the larger socio-cultural process, as supported by the evidence of the stamped sherds with floral motif. This motif is a peculiar aspect of the pottery found in this period from different sites in India. In addition to terracotta, one fragment of copper vessel retrieved from this period either suggest a local innovation and addition in the existing material used for making vessels i.e., clay or inter regional interactions because of which the copper

vessel was found from the research area. The continuation of usage of rice husk as a tampering material in the flat terracotta pieces in this period as well further enhance the hypothesis of intra-zonal interactions.

#### **V.4 Period IV**

56 sites in the current exploratory survey gave evidence of cultural material belonging to Period IV. The artefacts obtained from the stratified context from the sections of Biyan Tibba and Satowali laid the basis for the validation of the similar period material culture from other sites. The detailed description of the artefacts found at the site of Biyan Tibba and Satowali along with other explored sites are provided below.

##### **V.4.1 Cultural material from scraped sections**

###### **V.4.1.1 Section scraping at Biyan Tibba**

Layers 2 and 1 form **Period IV** (100-0 cm) of the site. All the pottery found from this period belong to the red ware category comprising of painted and plain potsherds. The paintings in the case of painted vessels are mostly of the rim and shoulder. This painted class of pottery is generally related with the Rangmahal ceramic tradition of 'mid to late 1<sup>st</sup> millennium AD' (Uesugi, 2014: 149). The vessel forms from this layer consists of pots, jars, and characteristic conical bowls of complex rim features like everted, bilaterally projecting tilted rim; everted straight, tapered rim; externally projecting flanged rim etc. Decorated sherds with paintings (Fig. V.24 A), rippled bands with mica dusting (Fig. V.24 B), chequered patterns (Fig. V.24 C), stamped designs (Fig. V.24 D), and incised lines with incised decorative patterns (Fig. V.24 E), are found from this period.

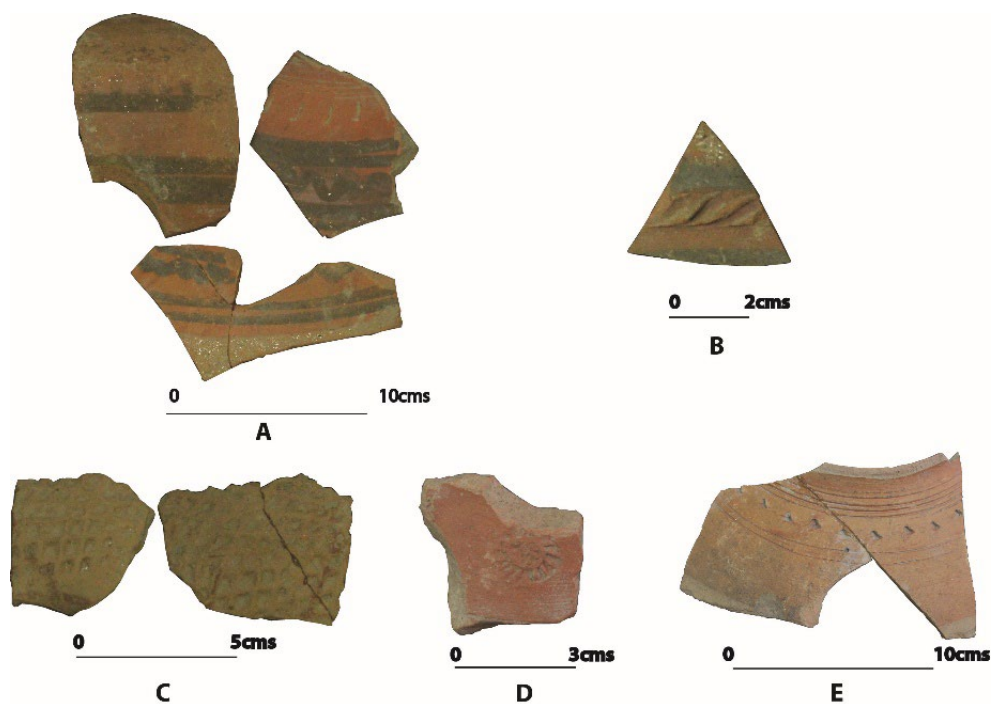


Figure V.24 A – Black on Red ware B – Rippled band with black horizontal lines with mica dusting  
C – Pottery with chequered pattern D – Pottery with stamped design E – Sherdd with incised design and decorated patterns belonging to Period IV

#### V.4.1.2 Section scraping at Satowali

The Layer 2 and 1 constitute **Period IV** (100-0 cm) of the site. This period is similar to the Period IV at Biyan Tibba. The dominant pottery industry of this period belongs to red ware type, which constitute mostly slipped vessels. The common vessel forms are pots and jars with a thick, quadrangular, or slightly beaded or rounded rim and everted neck, pots with a slightly incurved, beaked rim and conical bowls with a simple tapered rim etc. Flat pieces of terracotta with plant impression (Fig. V.25) and painted red ware with horizontal strokes in black (Fig. V.26) were also retrieved from this period.

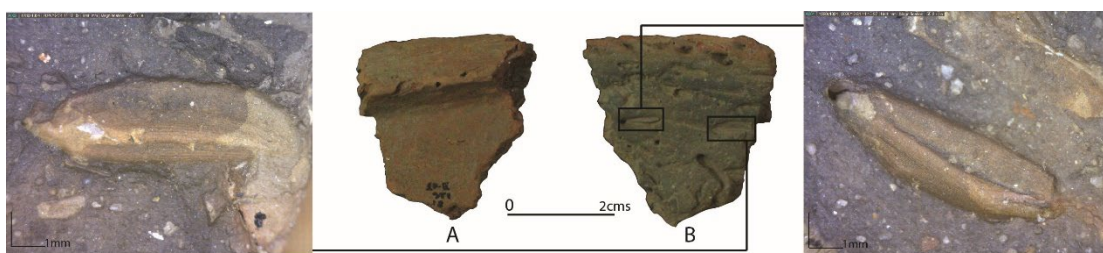


Figure V.25: Terracotta piece A: Front and B: Back side with grain impression (rice) belonging to Period

IV



Figure V.26: Black on Red ware sherds belonging to Period IV

#### **V.4.2 Material culture from other explored sites**

In addition to these sites, material culture attributed to period IV from explored context is described below.



Figure V.27: A – Terracotta mould original (on left) and cast on m-seal (right) (Sainth) B – Incised Ware (Biyani Tibba) C – Black on red ware with embossed design (Abdal) belonging to Period IV

The terracotta mould from the site of Sainth (Fig. V.27 A) stylistically was ascribed to Period IV after detailed investigations were done on the antiquity (Kour and Ajithprasad, 2017). Stylistically, the mould is dated between 6<sup>th</sup> to 8<sup>th</sup> century AD. The dating is done primarily on the basis of the artifacts found from the site in addition to certain stylistic parameters like the posture, shape of the face and the type of crown worn by the figure. The standing figure inside the mould appears to be some deity wearing a crown and standing in *asokadohadakrida* pose (associated with fertility goddesses). The incised sherd (V.27 B) has close similarity with a sherd found from period V (11<sup>th</sup>-15<sup>th</sup> C AD) of Hastinapur (Lal, 1954-55: Plate XXXV, No. 5). The black on red embossed sherd (V.27 C) stylistically fits into Period IV.

Also found from the site of Satowali were the sherds of glazed ware (Fig. V.28A; Fig. V.45 No. 173-174 Table V.4 No. 173-174) which is associated with Period IV, especially the pottery of Rangmahal tradition (Kour, 2018). The sherds have a bluish green glaze on the external surface and a transparent sheen on the internal surface (see Appendix I for XRF analysis of glazed ware). This group of pottery seems similar to the glazed ware sherds from the sites of Northern India: Maholi and Chaubara mounds in Mathura (Waddington, 1942: 138-139), Amreli in Saurashtra, Agroha in Haryana, Khokrakot in Haryana, Ahichhatra in Western UP (Rao, 1966: 73-74), Akota in central Gujarat (Subbarao, 1953: 102), Asthal Bohar Majra in Haryana (Uesugi, 2014: 137-138), Rangmahal in Rajasthan (Rydh, 1959: 156; Fig. V.28B) in the late Kushana, Gupta and post-Gupta context.

The previous research from various sites of the research area have reported glazed ware sherds termed as 'Muslim glazed ware' and 'Late Medieval glazed ware' (IAR 1980-81; 81-82; 83-84). Assuming that 'Muslim glazed' ware means 'Medieval glazed ware', many of these were found not associated with any other Medieval cultural material, they were thought to be of the Medieval

period because of the 'glazed ware'. This is also one of the reasons why there is a sudden leap in these sites from the Kushana to the Medieval period (see Appendix III). This glazed ware, therefore, seems to be mistakenly identified as the Medieval glazed ware by earlier researchers and was regarded as a marker of the Medieval period.

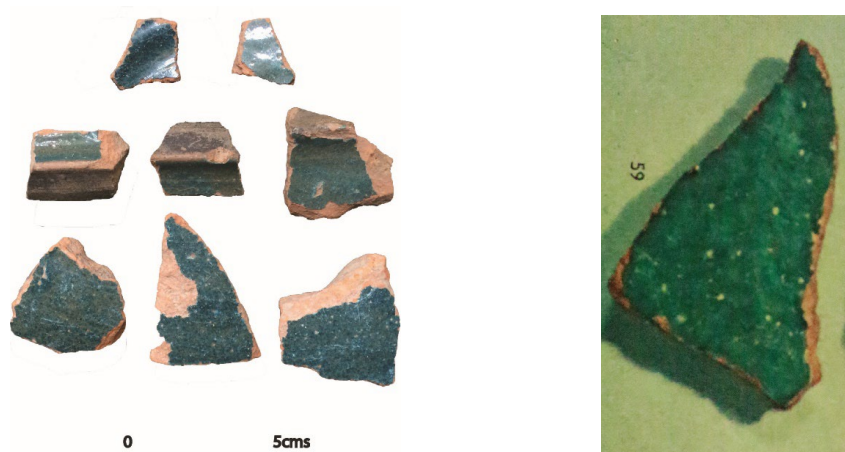


Figure V.28A- Glazed ware sherds from Satowali B. From Rangmahal

One of the aspects that became apparent during current research was that sites documented as terminating with the Kushana period by earlier researchers also had Late Kushana/Gupta period cultural remains. For example, the chronological sequence at Manda terminates at Kushana period in the documented literature, but the current research has reported evidence of Period IV from the site. It therefore appears that the "Late Kushana/ Early Gupta" (Period IV) sites were put under the broad category of Kushana period (Period III) by earlier researchers.

Similarly, the exploration of some of the sites (Chak Bowal and Dharm Khu for example) claimed as showing the evidence of 'Muslim glazed ware' by earlier researchers when re- explored by the researcher did not produce such evidence of the Medieval period. Rather the pottery belonging to Period IV of the new chronological scheme of current research was profoundly found.

It therefore seems that the sites where there is a leap in the material culture from the Kushana to medieval period with “Medieval Glazed Ware”, have the presence of Period IV (Late Kushana, Gupta, and Post-Gupta type) pottery and not Medieval remains. Hence, the existence of such sites showing a leap from the Kushana to the Medieval period without any intermediate in the research area seems to be questionable. What however appears logical is the presence of the intermediate period (Late Kushana/Gupta and Post Gupta period) in the region with the evidence of glazed ware as shown in the sites already discussed above.

#### **V.4.3 Pottery of Period IV**

The excavated site of Ambaran (IAR 2000-00: 68) gives evidence of bowls with sharp and straight rims belonging to this period. Excavation at the site of Tibba Name Shah (IAR 2009-10: 70) refers to the pottery of this period belonging to red ware of slipped variety and black on red ware with shapes like dishes, bowls, basins, spouts, basin with lips, lids, storage jars and miniature pots.

The current explored pottery of this period primarily belongs to red ware, mainly the slipped variety, both of plain and painted category. The paintings are mostly on the rim and shoulder with designs like vertical lines on the rim (Fig. V. 29), wavy lines on the rim (Fig. V.30), triangular motifs/leaf pattern on the rim (Fig. V.31), patterns with short horizontal lines- resembling a ‘ladder’ (Fig. V.32), chevron pattern in monochrome black painting and bichrome white and black paintings on red surface and non-geometric patterns (Fig. V.33, V.34). This class of pottery is associated with Rangmahal ceramic tradition, hitherto undiscovered in the research area. The patterns have similarities with sites in Rajasthan and Pakistan as shown in Figure V.35, V.36 and V.37). The research area therefore marks the northern extension of this pottery tradition, signifying the extensive traversing of the trade routes during this period (Kour, 2018).



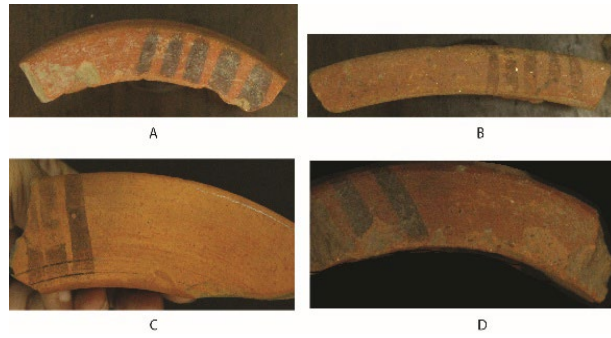


Figure V.29: Painted vertical lines on the rim  
A – Baba Potho B – Satowali C – Sai Khurd Tibba  
D – Jamraal of Period IV

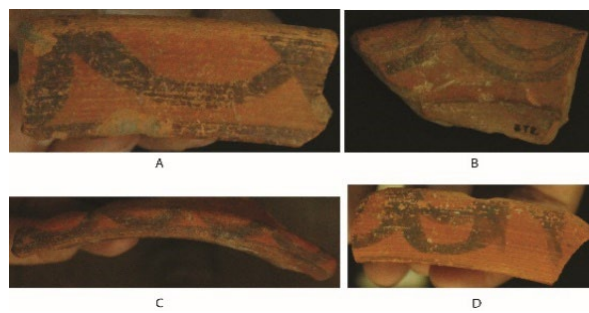


Figure V.30: Painted wavy lines of the rim A – Biyan Tibba B – Bathur C – Biyan Tibba D – Biyan Tibba of Period IV

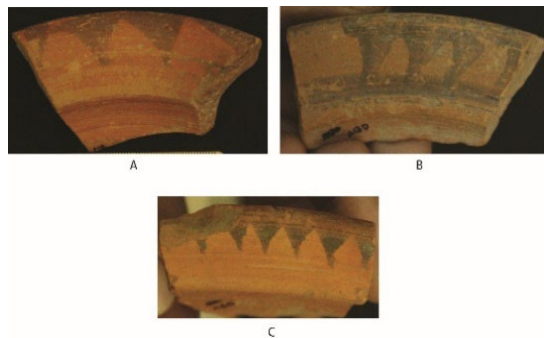


Figure V.31: Triangular motifs on the rim A-C. Abduleyan of Period IV



Figure V.32: Pattern with short horizontal lines (Abdal and Biyan Tibba) (from left to right) of Period IV

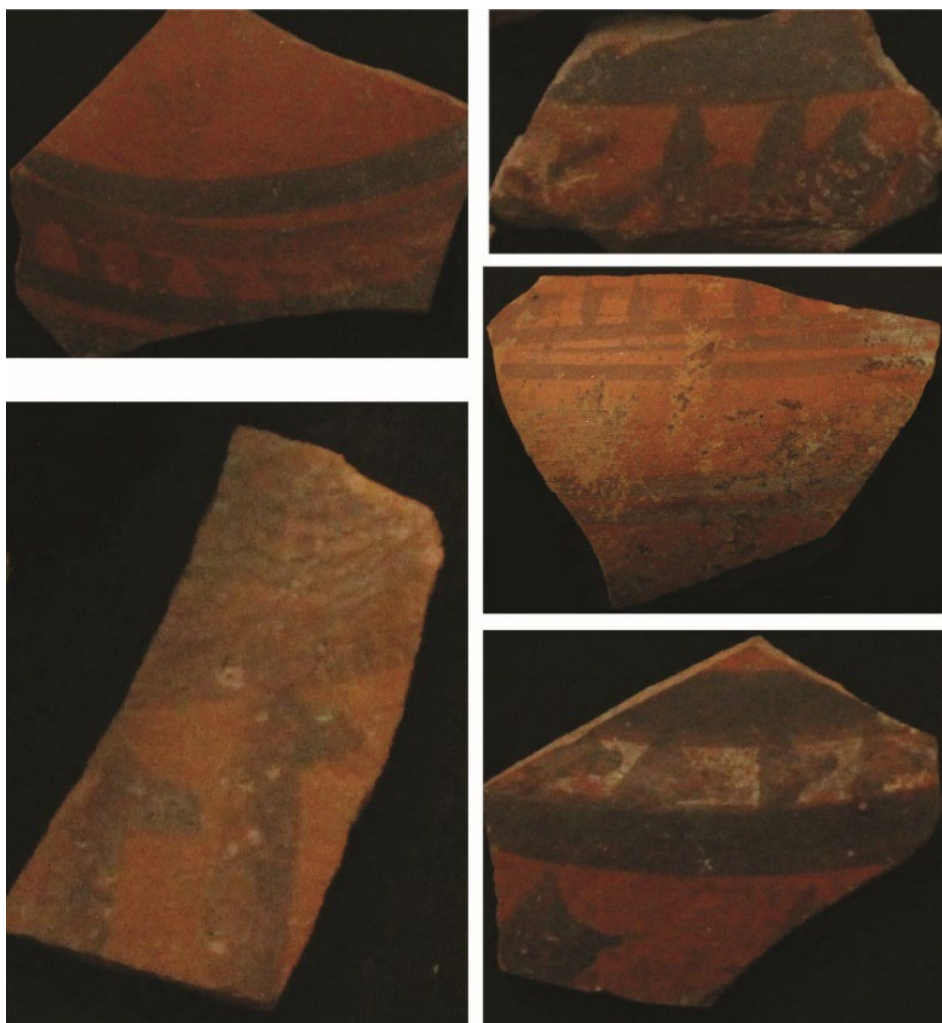


Figure V.33: Sherds with chevron pattern- monochrome and bichrome (Biyan Tibba) of Period IV

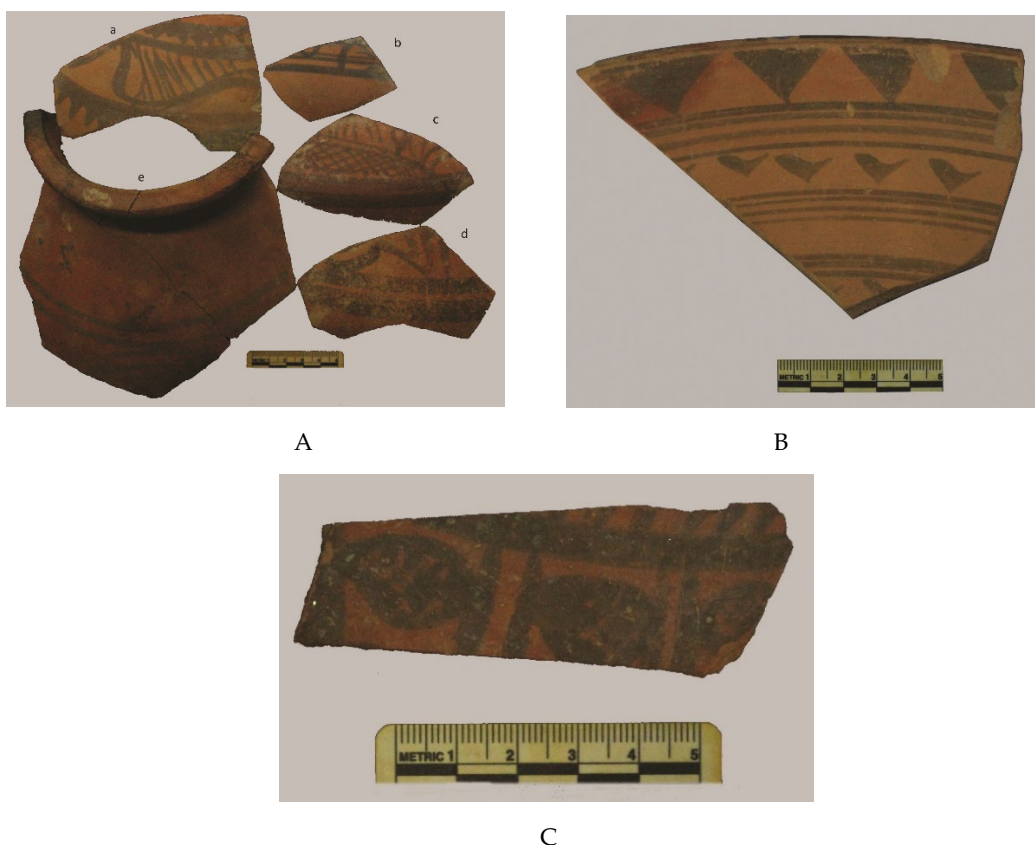


Figure V.34: Non geometric pattern from A – (a) Sai Khurd Tibba (b) Baba Potho (c) Kalali (d) Sai Khurd Tibba (e) Sai Khurd Tibba B – Satowali C – Kalali of Period IV



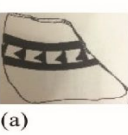




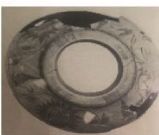





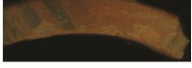

Vertical lines on the rim		Chevron Pattern		Ladder Motif	
<i>Rangmahal</i> (Rydh 1959)	<i>Jammu</i>	(a) <i>Bahawalpur</i> (Field 1959) (b) <i>Rangmahal</i> (Rydh 1959)	<i>Jammu</i>	<i>Fattehgarh-Hanumangarh</i> (Dibyopama 2015)	<i>Jammu</i>
					
		(a)			
					
		(b)			

Figure V.35: Comparative table of motifs on Rangmahal pottery (Kour, 2018)

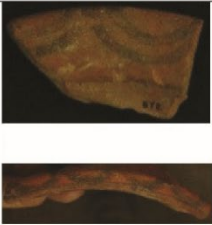



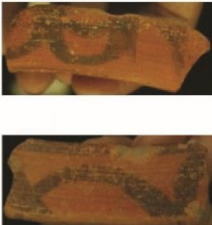





Wavy Lines on the rim		Leaf Motif	
<i>a-Fattehgarh-Hanumangarh (Dibyopama 2015)</i> <i>b-Rangmahal(Rydh 1959)</i>	<i>Jammu</i>	<i>a-Dablrarhar-Panchhipir Hanumangarh(Dibyopama 2015)</i> <i>b-Pilibanga Hanumangarh (Dibyopama 2015)</i> <i>c- Rangmahal (Rydh 1959)</i>	<i>Jammu</i>
(a)		(a) 	
		(b) 	
(b)		(c)   	 

Figure V.36: Comparative table of motifs on Rangmahal pottery (Kour, 2018)



Figure V.37: Comparative figure depicting similar motifs on Rangmahal pottery (Kour, 2018)



The common vessel forms are pots and jars with complex rim features like hooded rim, flanged rim with designs on the rim, grooved clubbed rim. The bowls in both slipped and unslipped variety are found. The characteristic sharp conical bowls of this period are always unslipped (Fig. V.38 to V.45, Table V.4). As already mentioned, the glazed ware seems to be associated with this period. A representative chart comprising of selected comparable pottery belonging to Period IV from different sites and Jammu is depicted in Figure V.45b and V.45c.

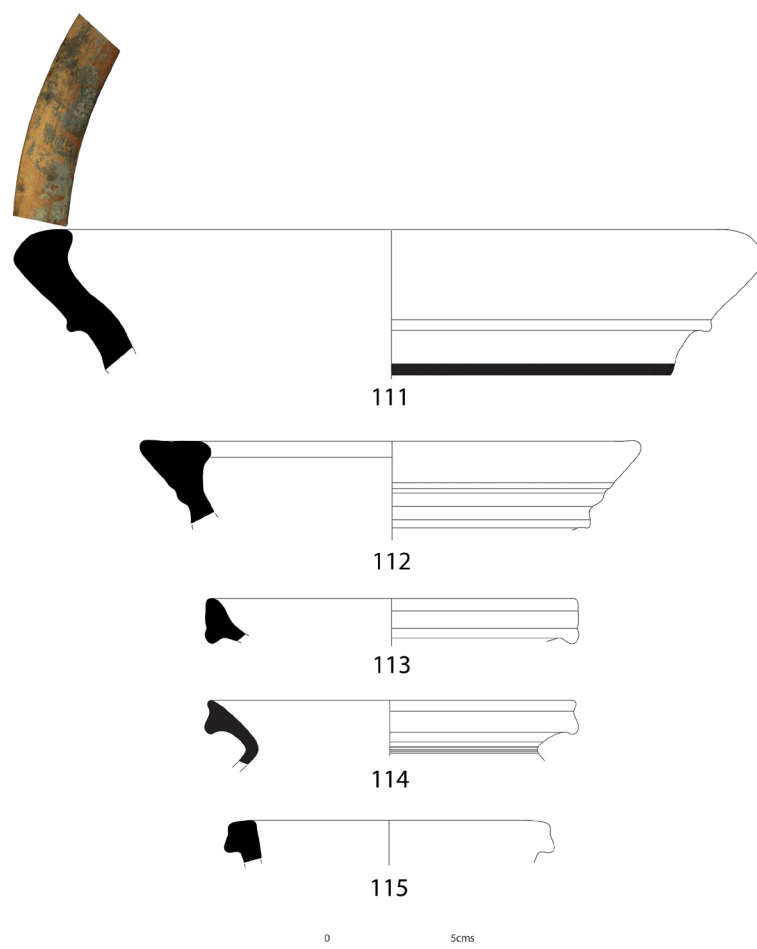


Figure V.38: Pottery vessels of Period IV

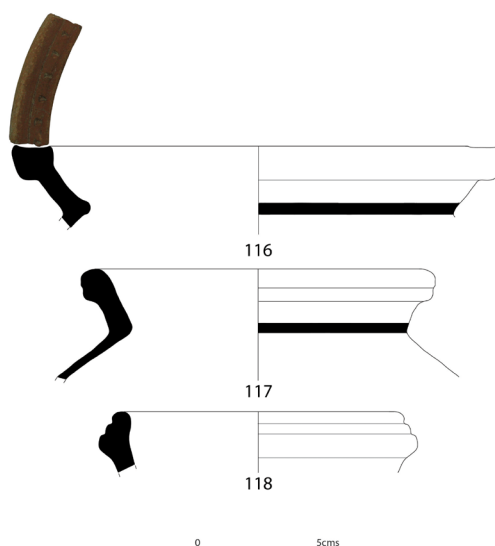


Figure V.38a: Pottery vessels of Period IV

**Table V.4- Description of the sherds belonging to Period IV**  
**★ Section scraped ■ Explored context \* Comparison not found**

Sr. No.	Site	Description of the sherd	Comparable site
111	★Biyan Tibba	Fragment of a large pot In-turned, thick rounded hooded rim with an external ridge Red ware; well fired, fine painted pottery Colour:10R6/6 Light red Slip color:10R5/4 weak red, slipped all over Painted vertical lines on the rim and horizontal line on the external upper body. Painting color:10R4/3 weak red	Rangmahal- Fig. 45- c (Rydh, 1959) See fig. V.45b-a
112	★Biyan Tibba	Fragment of a medium size pot. Bilaterally projected (nail headed), slightly incurved, flat-top rim with a small exterior ridge Red ware; well baked fine pottery Core color:10R6/8 Light red Slip color:10R6/4 Pale red; slipped only from outside	*
113	★Biyan Tibba	Fragment of a small pot Vertical, triangular rim with a drooping flange Red ware; well baked fine pottery Core color-10R6/6- Light red Slip color-10R5/6- Red- slipped all over	Variant Rangmahal Fig. 53, No. 14 (Rydh, 1959) See fig. V.45b-b
114	★Biyan Tibba	Fragment of a small pot Out-turned flanged rim with constricted neck Red ware; well baked fine pottery Core color-10R6/3- Pale red Slip color-10R5/6- Red- slipped all over	Rangmahal Fig. 72, No. 2 (Rydh, 1959) See fig. V.45b-c

115	★Biyān Tibba	Fragment of a small pot Vertical, externally thick, flat-topped, quadrangular, flanged rim Red ware; well baked fine pottery Core color-10R6/6- Light red Slip color-10R5/4- Weak red- slipped all over	*
116	★Satowali	Fragment of a medium pot Vertical, externally thickened quadrangular collared rim with depressed top and constricted neck Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color-10R5/4- Weak red - slipped all over Horizontal painting on the external upper body Painting color-10R4/3- Weak red Decoration in the form of incised pattern on the rim	*
117	★Satowali	Fragment of a small pot Out-turned rounded rim with a small external ridge and constricted neck. Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color-10R5/4- Weak red- slipped on the outside and on the inner side of the rim Horizontal painting on the external upper body Painting color-10R4/3- Weak red	Somnath- Fig. 32 No. VE2 (Nanavati et al., 1971) See fig. V.45b-d
118	★Satowali	Fragment of a small pot Almost vertical, rounded, externally grooved, collared rim Red ware; well baked fine pottery Core color- 10R6/8- Light red Slip color-10R6/6- Light red- slipped all over	Variant Rangmahal Fig. 53 No. 20 (Rydh, 1959) See fig. V.45b-e

★ Section scraping ■ Explored context \* Comparison not found

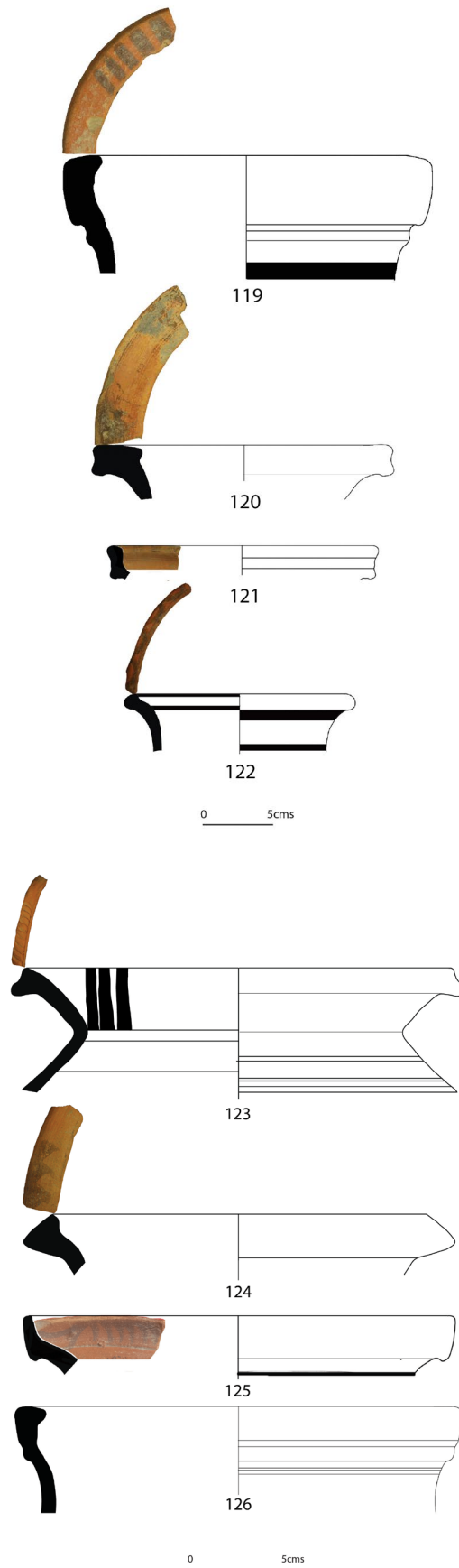


Figure V.39: Pottery vessels of Period IV



★ Section scraping ■ Explored context \* Comparison not found

Sr. No.	Site	Description	Correspondence
119	■Baba Potho	Fragment of a large pot In-curved, externally thickened, flat-topped, hooded rim with an external groove and a ridge and narrow neck. Red ware; well baked fine pottery Core color- 10R6/8- Light red Slip color-10R5/6- red- slipped till the top of the rim and outside Vertical lines painted on the rim and horizontal line on the external upper body Painting color- 10R4/2- Weak red	Rangmahal Fig. 51. No. 7 (Rydh, 1959) See fig. V.45b-f
120	■Abdal	Fragment of a medium pot Outturned, bilaterally projected, flat-topped, flanged rim with a constricted neck. Red ware; well baked fine pottery Core color- 10R6/8- Light red Slip color-10R5/6- red- slipped all over Vertical lines painted on the rim Painting color- 10R4/2- Weak red	Rangmahal Fig. 53 No. 9 (Rydh, 1959) See fig. V.45b-g
121	■Abdeleyan	Fragment of a medium pot Vertical, rounded rim with an external groove and a ridge below Red ware; well baked fine pottery Core color -10R6/6- Light red Slip colour-10R6/4- Pale red- slipped all over Vertical lines painted on the rim Painting color- 10R4/2- Weak red	Variant Rangmahal Fig. 53 No. 16 (Rydh, 1959)
122	■Biyā Tibba -	Fragment of a small pot Out-turned, uniformly thick and rounded rim Red ware; well baked fine pottery Core color- 10R6/8- Light red Slip color-10R5/6- red- slipped all over Wavy lines painted on the rim, horizontal lines on the internal and the external upper body. Painting color- 10R4/2- Weak red	Variant Rangmahal Fig. 44 No. 2 (Rydh, 1959)
123	■Abdal	Fragment of a medium pot External projecting flanged rim with constricted neck Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R5/6- red- slipped all over Vertical lines painted on the internal side of the rim. Painting color-10R4/2- Weak red Grooved decoration on the top of the rim	Rangmahal Fig. 72 No. 2 (Rydh, 1959)
124	■Abduleyan	Fragment of a medium pot Externally project and up-turned and beveled rim Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color-10R6/4-- Pale red- slipped all over Leaf motif painted on the rim. Painting color- 10R4/2- Weak red	Rangmahal Fig. 51 No. 3 (Rydh, 1959) See fig. V.45b-h

Sr. No.	Site	Description	Correspondence
125	■Abduleyan	Fragment of a medium pot Vertical, slightly drooping collared rim with constricted neck Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color-10R5/4- Weak red- slipped all over Leaf motif painted on the inside of the rim and horizontal line on the external upper body Painting color- 10R4/2- Weak red	Rangmahal Fig. 54 No. 5 (Rydh, 1959) See fig. V.45b-i
126	■Jindermelu Tibba	Fragment of a medium pot Vertical, thickened, internally projected rim with an external ridge, constricted neck Red ware; well baked fine pottery Core color- 10R6/4- Pale red Slip color- 10R6/4-Pale red- slipped all over	Rangmahal Fig. 51 No. 5 (Rydh, 1959)

★ Section scraping ■ Explored context \* Comparison not found

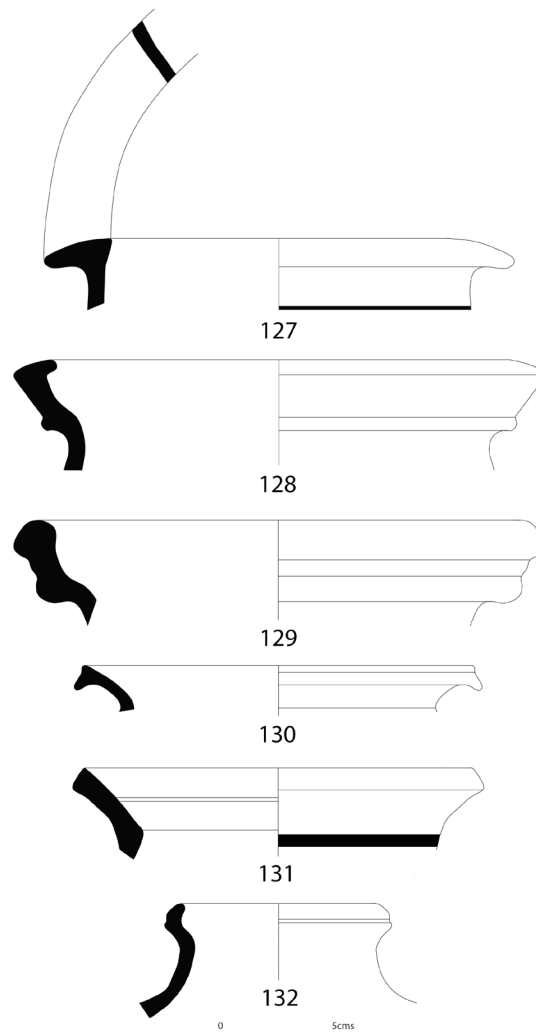


Figure V.40: Pottery vessels of Period IV

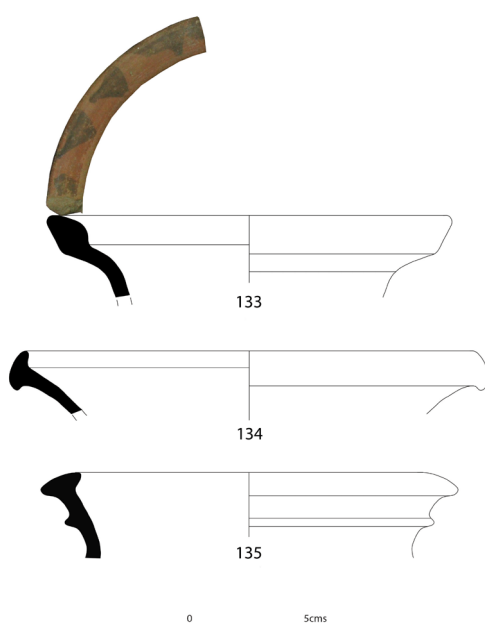


Figure V.40a: Pottery vessels of Period IV

★ Section scraping ■ Explored context \* Comparison not found

Sr. No	Site	Description	Correspondence
127	■Manda	Fragment of a small pot Externally splayed out, flat-topped slightly drooping rim Red ware; well baked fine pottery Core color- 10R6/6 – Light red Slip color- 10R5/4- Weak red- slipped all over Vertical lines painted on the rim and horizontal line on the external upper body Painting color- 10R4/3- Weak red	Variant Rangmahal Fig. 56. No.3 (Rydh, 1959)
128	■Sai Khurd Tibba	Fragment of a medium pot In-turned, hooded rim with an external ridge Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R6/4- Pale red- slipped all over	Rangmahal Fig. 45, No. c (Rydh, 1959)
129	■Kalali	Fragment of a medium pot Slightly out-turned, bilaterally projecting rounded rim with a thick rounded flange and constricted neck. Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R6/4- Pale red- slipped all over	Variant Rangmahal Fig. 53, No. 6 (Rydh, 1959) See fig. V.45c-j
130	■Pinjore	Fragment of a small pot Out-turned flanged rim with constricted neck Red ware; well baked fine pottery Core color- 10R6/6 - Light red Slip color- 10R5/4- Weak red- slipped all over	Rangmahal. Fig. 72, No. 2 (Rydh, 1959)

Sr. No.	Site	Description	Correspondence
131	■Manda	Fragment of a medium pot Out-turned, uniformly thickened sharp angular rim with constricted neck and internal carination. Red ware; well baked fine pottery Core color- 10R6/6 - Light red Slip color- 10R5/4- Weak red- slipped all over Horizontal line painted on the external upper body Painting color- 10R4/3- Weak red	Rangmahal Fig. 72. No. 18 (Rydh, 1959)
132	■Lehrian-Kot Garhi	Fragment of a small pot In-turned, rounded rim with an external ridge and a concave neck Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R6/4- Pale red- slipped till the rim on the inside and on the outside	Rangmahal Fig. 53 No. 13 (Rydh, 1959) See fig. V.45c-k
133	■Abdal	Fragment of a medium size vase/jar Slightly out-turned, thick, triangular rim with constricted neck. Red ware; well baked fine pottery Core color-10R6/6- Light red Slip color-10R5/6- red- slipped only from the outside Leaf motif painted on the rim Painting color-10R4/3- Weak red	Personal Observation- Vadnagar Late Kshtrapa pottery
134	★Biyan Tibba	Unslipped fragment of a medium vase/Jar- Out-turned bilaterally projecting (nail headed) beaded rim with a constricted neck. Red ware; well baked fine pottery Core color- 10R6/3- Pale red	Jetavana Fig. 289, No. RP 5769 (Yoneda, 1997) See fig. V.45c-l
135	★Biyan Tibba	Fragment of a small vase Bilaterally projecting, out-turned (nail headed) rim with an external ridge. Red ware; well baked fine pottery Core color- 10R5/2- Weak red Slip color- 10R5/1- Reddish grey- slipped only on the outside	Rangmahal- Fig. 50- No. 1 (Rydh, 1959) See fig. V.45c-m

★ Section scraping ■ Explored context \* Comparison not found

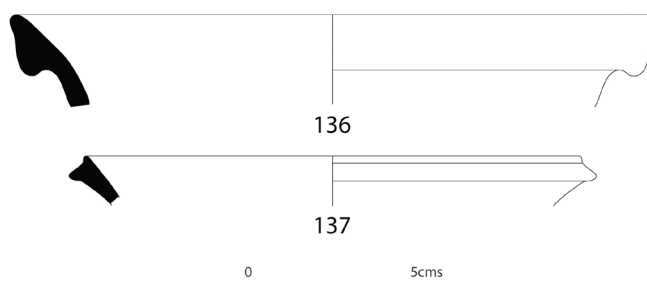


Figure V.41: Pottery vessels of Period IV

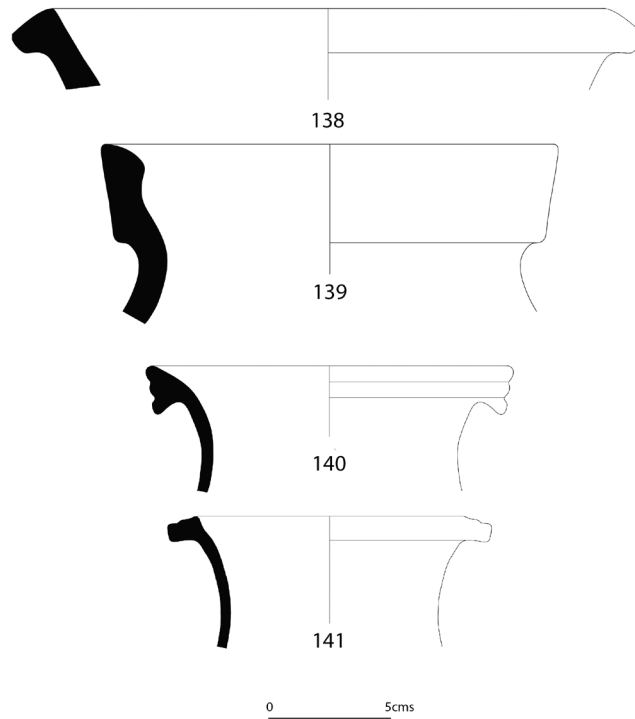


Figure V.41a: Pottery vessels of Period IV

★ Section scraping ■ Explored context \* Comparison not found

Sr. No.	Site	Description	Correspondence
136	★Satowali	Fragment of a medium vase/jar Out-turned, externally thickened, triangular, collared rim Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color-10R5/6- red- slipped all over	Variant Tulamba- Fig. 25. No. 25 (Mughal, 1967)
137	★Satowali	Unslipped fragment of a small vase/jar Out-turned, externally thickened, and flanged rim. Red ware; well baked fine pottery Core color- 10R6/6-Light red	Variant Sravasti Fig. 17 No. IA (Sinha, 1967)
138	■Guda	Fragment of a large vase/jar Out-turned, externally projected, drooping rim. Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R5/6- red- slipped all over	Aktha Fig. 59 No.8 (Jayaswal, 2009)

Sr. No.	Site	Description	Correspondence
139	■Balu chak Tibba	Fragment of a medium vase/jar Almost vertical thick, internally beveled rim with an external ledge over the constricted neck Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R5/6- red- slipped all over	Ahichchhatra Fig. 4. No. 49 (Ghosh & Panigrahi, 1946) See fig. V.45c-n
140	■Lower Kalyanpur Tibba	Fragment of a small vase/jar Out-curved, externally thickened flanged rim with grooves and a constricted neck Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R6/4- Pale red- slipped all over	Jetavana Tab 15 No. RP 2235 (Yoneda, 1997) See fig. V.45c-o
141	■Kalali	Fragment of a small vase/jar Externally splayed out, thick, flat and grooved top quadrangular rim. Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R6/4- Pale red-slipped all over	Variant Aktha Fig. 59 No.10 (Jayaswal, 2009) See fig. V.45c-p

★ Section scraping ■ Explored context \* Comparison not found

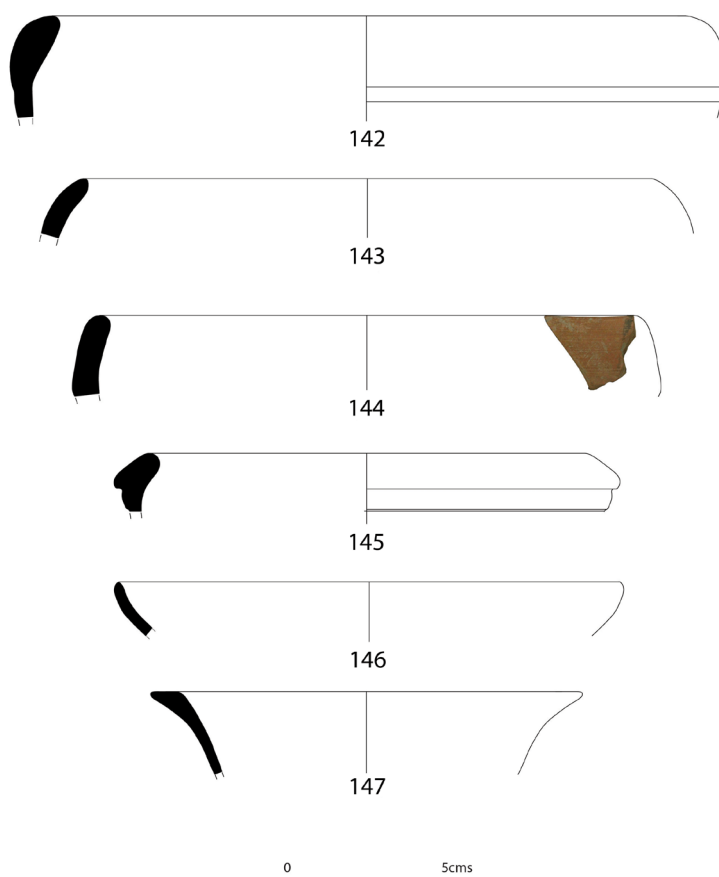


Figure V.42: Pottery vessels of Period IV

**★ Section scraping ■ Explored context \* Comparison not found**

Sr. No.	Site	Description	Correspondence
142	★Biyan Tibba	Fragment of a straight sided medium sized bowl In-turned thick rounded rim Red ware; well baked fine pottery Core color-10R6/6- Light red Slip color-10R6/4- Pale red- slipped all over	Variant Rangmahal Fig. 87 No. 6 (Rydh, 1959) See fig. V.45c-q
143	★Biyan Tibba	Fragment of a convex sided medium sized bowl In-turned featureless rim Red ware; well baked fine pottery Core color10R6/3- Pale red Slip color-10R6/2- Pale red- slipped all over	*
144	★Biyan Tibba	Fragment of a medium size convex bowl In-turned rounded rim. Red ware; well baked fine pottery Core color-10R6/6- Light red Slip color-10R5/6- red- slipped all over Vertical painted line on the external rim Painting color-10R4/3- Weak red	Rangmahal Fig. 89 No. 19 (Rydh, 1959)
145	★Biyan Tibba	Fragment of a small conical bowl In-turned rounded externally collared rim Red ware; well baked fine pottery Core color-10R6/6- - Light red Slip color-10R5/6- red- slipped all over	Rangmahal Fig. 86 No. 5 (Rydh, 1959) See fig. V.45c-r
146	★Biyan Tibba	Unslipped fragment of a shallow bowl Vertical featureless rim. Red ware; well baked fine pottery Core color- 10R6/3- Pale red	Jetavana Tab 36 No. RP 6537 (Yoneda, 1997)
147	★Biyan Tibba	Fragment of a small deep bowl Externally projecting thickened rim with a flat top Red ware; well baked fine pottery Core color-10R6/6- Light red Slip color-10R5/6-red- slipped all over	Variant Rangmahal Fig. 91 No. 4 (Rydh, 1959)

**★ Section scraping ■ Explored context \* Comparison not found**

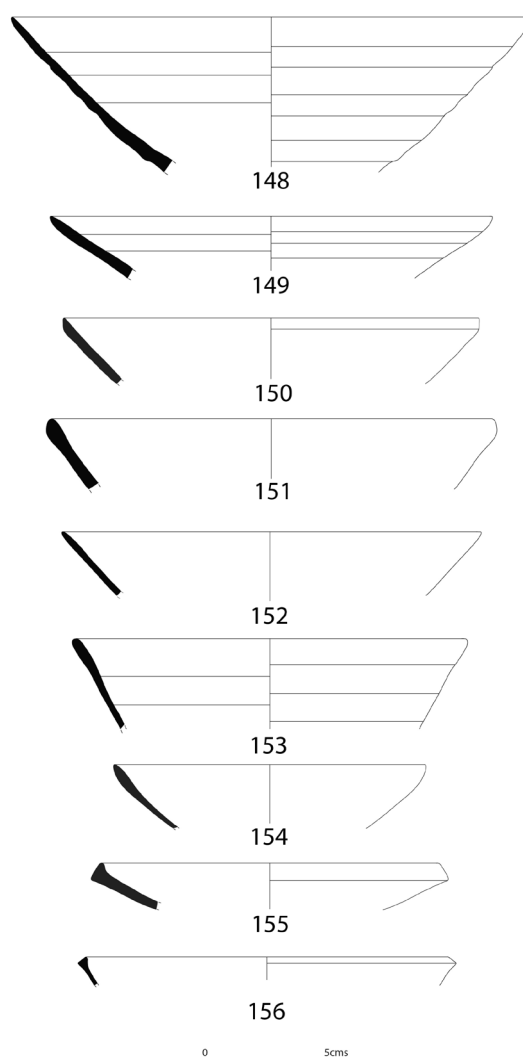


Figure V.43: Pottery vessels of Period IV

★ Section scraping ■ Explored context \* Comparison not found

Sr. No.	Site	Description	Correspondence
148	★Biyan Tibba	Unslipped fragment of a medium size, deep, conical bowl with ribbed exterior Out-turned tapered rim Red ware; well baked fine pottery Core color- 10R6/6- Light red	Jetavana Tab 31 No. RP 5610 (Yoneda, 1997) See fig. V.45c-s
149	★Biyan Tibba	Unslipped fragment of a medium shallow bowl with ribbed exterior Out-turned tapered rim Red ware; well baked fine pottery Core color- 10R6/3- Pale red	Rangmahal Fig. 93 No. 15 (Rydh, 1959)  Tulamba Fig 28 No. 24 (Mughal, 1967)
150	★Biyan Tibba	Unslipped fragment of a small conical bowl Out-turned, externally beveled rim. Red ware; well baked fine pottery Core color- 10R6/6- Light red	Bharadvaja Ashrama Fig. 20, No. 19 (Lal, 2011)
151	★Biyan Tibba	Unslipped fragment of a small conical bowl Out-turned, thickened rounded rim Red ware; well baked fine pottery	Jetavana- Fig. 258 No. RP 5019 (Yoneda, 1997)



		Core color- 10R6/3- Pale red	
152	★Biyan Tibba	Unslipped fragment of a small conical bowl Out-turned tapered rim Red ware; well baked fine pottery Core color- 10R6/3- Pale red	Jetavana Tab 31 No. RP 5610 (Yoneda, 1997)
153	★Biyan Tibba	Unslipped fragment of a small deep, conical bowl Out-turned, rounded rim Red ware; well baked fine pottery Core color- 10R6/2- Pale red	Variant Aktha Fig. 61 No. 40 (Jayaswal, 2009)
154	★Biyan Tibba	Unslipped fragment of a small conical bowl Out-turned, internally thickened rim Red ware; well baked fine pottery Core color- 10R6/6- Light red	Variant Jetavana- Tab 39 No. RP 2048 (Yoneda, 1997)
155	★Biyan Tibba	Unslipped fragment of a small bowl/shallow dish Upturned externally beveled rim Red ware; well baked fine pottery Core color- 10R6/3- Pale red	*
156	★Biyan Tibba	Unslipped fragment of a small bowl Upturned externally beveled, thickened rim Red ware; well baked fine pottery Core color- 2.5YR6/2- Pale red	Jetavana- Tab. 39 No. RP 7004 (Yoneda, 1997)

★ Section scraping ■ Explored context \* Comparison not found

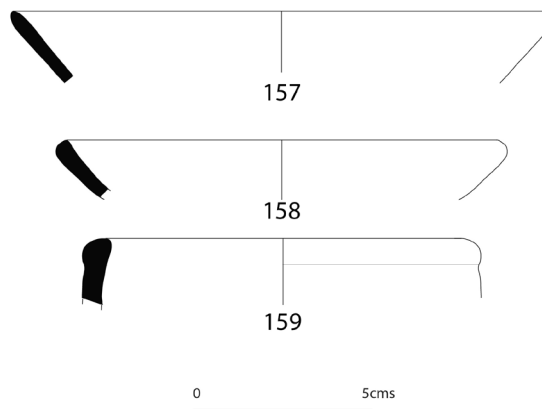


Figure V.44: Pottery vessels of Period IV

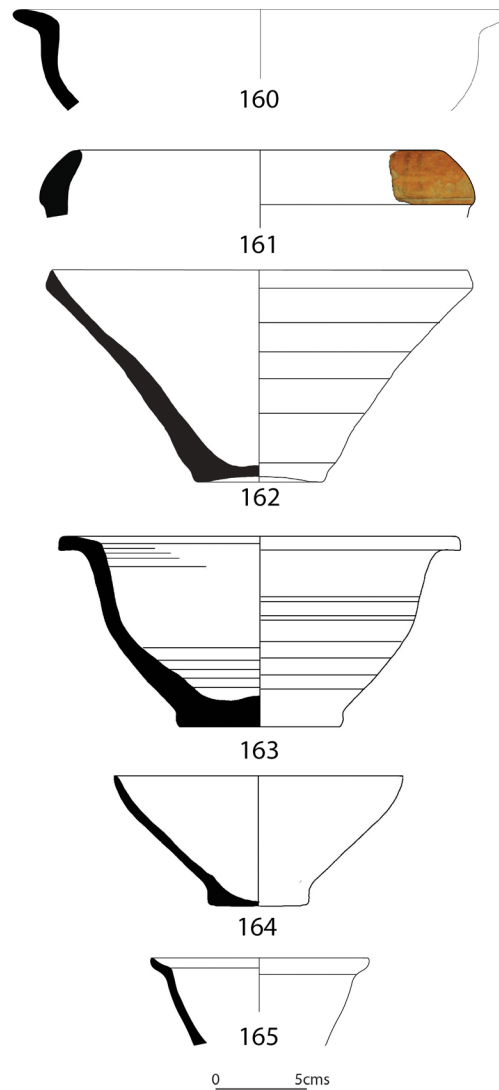


Figure V.44a: Pottery vessels of Period IV

★ Section scraping ■ Explored context \* Comparison not found

Sr. No.	Site	Description	Correspondence
157	★Satowali	Unslipped fragment of a small conical bowl Out-turned, featureless tapered rim Red ware; well baked fine pottery Core color- 10R6/6- Light red	Jetavana- Fig. 283 No. RP 5612 (Yoneda, 1997)
158	★Satowali	Unslipped fragment of a small conical bowl Out-turned rounded rim Red ware; well baked fine pottery Core color- 10R6/6- Light red	*
159	★Satowali	Fragment of a small convex bowl Slightly in-turned, externally thickened rounded rim. Red ware; well baked fine pottery Core color- 10R6/8- Light red Slip color-10R6/6- Light red- slipped all over	*

160	■Dohana Chak Tibba	Fragment of a large straight sided bowl Horizontally splayed out, flat-top rounded rim with straight sides and a blunt carination Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R5/4 – Weak red- slipped all over	Variant Rangmahal Fig. 89 No. 22 (Rydh, 1959)
161	■Taru Chak Tibba	Black on red ware fragment of a medium size convex bowl In-turned, externally thickened rim forming a small ledge. Core color- 10R6/6- Light red Red ware; well baked fine pottery Slip color-10R5/4- Weak red- slipped all over Vertical painted line on the external rim Painting color- 10R4/2- Weak red	Rangmahal- Fig. 87. No.6 (Rydh, 1959)
162	■Mana Tibba	Unslipped fragment of a large conical bowl Externally beveled rim, slightly hollow base. Red ware; well baked fine pottery Core colour-10R6/6-Light red	Rangmahal Fig. 93 No. 6 (Rydh, 1959)
163	■Sai Khurd Tibba	Unslipped fragment of a medium, straight sided bowl Horizontally splayed out flat-top rim with grooved sides and disc base. Red ware; well baked fine pottery Core color- 10R 6/6- Light red	Variant Rangmahal Fig. .91 No. 1 (Rydh, 1959)
164	■Mana Tibba	Unslipped fragment of a small conical bowl slightly tapered rim and disc base Red ware; well baked fine pottery Core colour-10R6/3- Pale red	Dabri Ratan-Fig. 5 No. 4 (Uesugi, 2014)
165	■Sainth	Unslipped fragment of a small conical bowl Obliquely splayed out rim with a wide, shallow groove on the interior. Red ware; well baked fine pottery Core color- 10R6/4- Pale red	Variant- Rangmahal Fig. 84 No. 4 (Rydh, 1959) See fig V.45c- t

★ Section scraping ■ Explored context \* Comparison not found

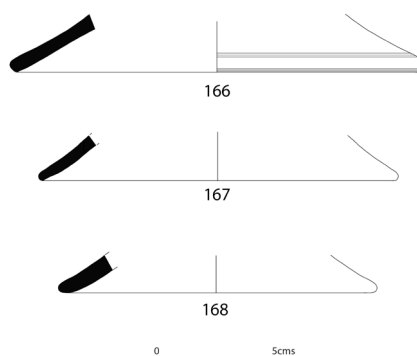


Figure V.45: Pottery vessels of Period IV

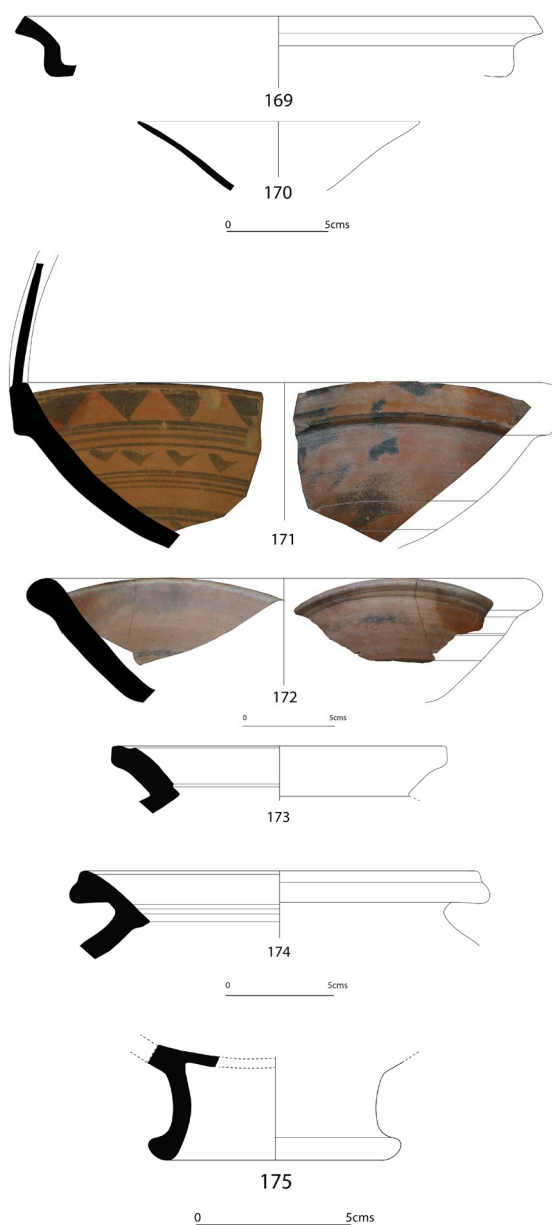


Figure V.45a: Pottery vessels of Period IV

★ Section scraping ■ Explored context \* Comparison not found

Sr. No.	Site	Description	Correspondence
166	★Biyan Tibba	Unslipped fragment of a medium sized lid Outturned rounded rim Red ware; well baked fine pottery Core color- 10R6/3- Pale red	*
167	★Biyan Tibba	Unslipped fragment of a small lid Outturned, tapered rim Red ware; well baked fine pottery Core color- 10R6/6- Light red	Rangmahal- Fig. 93 No. 10 (Rydh, 1959)
168	★Biyan Tibba	Unslipped fragment of a small lid Outturned, rounded rim Red ware; well baked fine pottery	*

		Core color- 2.5YR6/2- Pale red	
169	■Kalali	Fragment of a large dish Out-turned, externally thick sharp angular rim rim, short straight sides and flat base. Red ware; well baked fine pottery Core color-10R 6/8- Light red Slip color- 10R6/6- Light red- slipped all over	Variant Tulamba- Fig. 25 No. 1 (Mughal, 1967)
170	■Dohana Chak Tibba	Unslipped fragment of a shallow conical dish Out-turned, sharp tapering rim Red ware; well baked fine pottery Core color- 10R6/6- Light red	Jetavana Tab 36 No. RP.6546 (Yoneda, 1997)
171	■Satowali	Fragment of a medium basin Almost vertical, externally thickened collared rim forming a ledge. Red ware; well baked fine pottery Core color- 2.5YR 6/6- Light red Slip color- 2.5YR 5/6- red Painted on the inside with chevron, leaf motifs and horizontal lines Painting color- 10R4/2- Weak red	Variant Aktha Fig. 65 No. 80 (Jayaswal, 2009)
172	■Satowali	Fragment of a medium basin Out-turned thick, rounded rim with grooved external. Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color-10R6/4- Pale red Painted on the inside, towards the base. Probably a circular design. Painting color- 10R4/2- Weak red	Jetavana Tab 39 No. RP5915 (Yoneda, 1997)
173	■Satowali	Fragment of a small pot Obliquely splayed out thick rounded rim with a grooved top and a constricted neck Glazed ware; well baked fine pottery Core color- 10R6/6- Light red Bluish green glaze on the external surface	*
174	■Satowali	Fragment of a medium pot Obliquely splayed-out flanged rim with a constricted neck Glazed ware; well baked fine pottery Core color- 10R6/6- Light red Bluish green glaze on the external surface	*
175	■Dohana Chak Tibba	Fragment of a pedestalled Bowl- Non continuous low pedestal out-turned base Red ware; well baked fine pottery Core color- 10R6/6- Light red Slip color- 10R5/6- red- slipped all over	Variant Jetavana Tab 8 No. RP 2014 (Yoneda, 1997)

★ Section scraping ■ Explored context \* Comparison not found

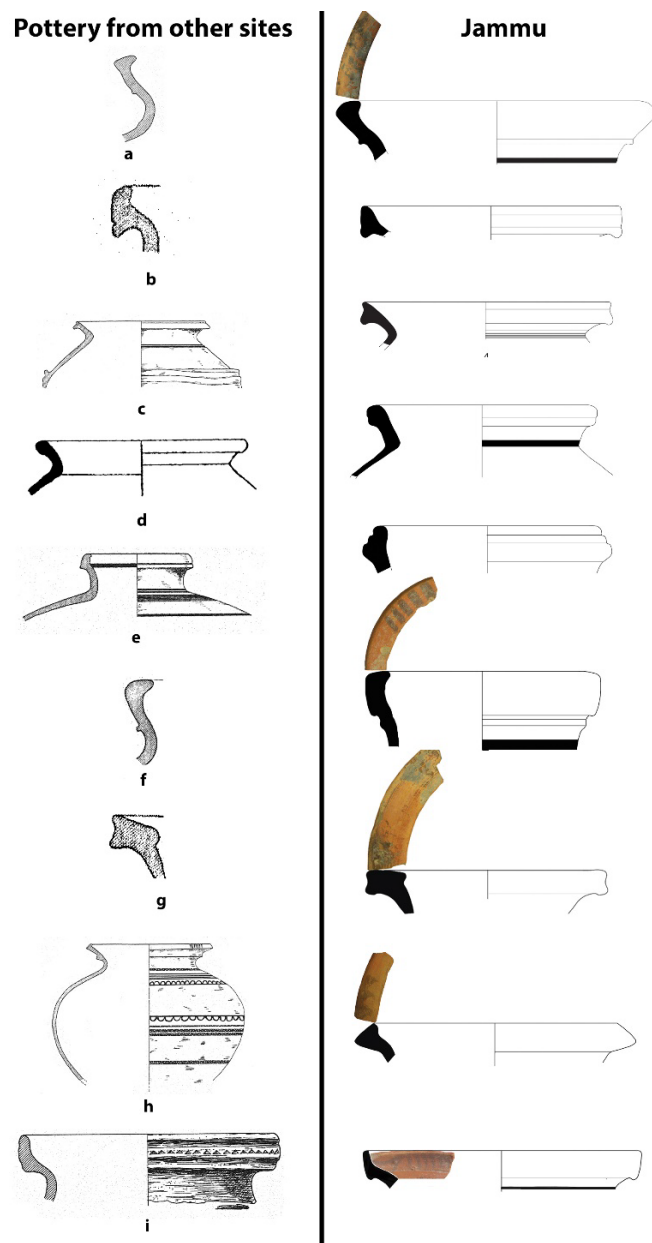


Figure V.45b: Representative comparative pottery from different sites belonging to Period IV  
a-c. Rangmahal (Rydh, 1959); d. Somnath (Nanavati et al., 1971); e-i. Rangmahal (Rydh, 1959)

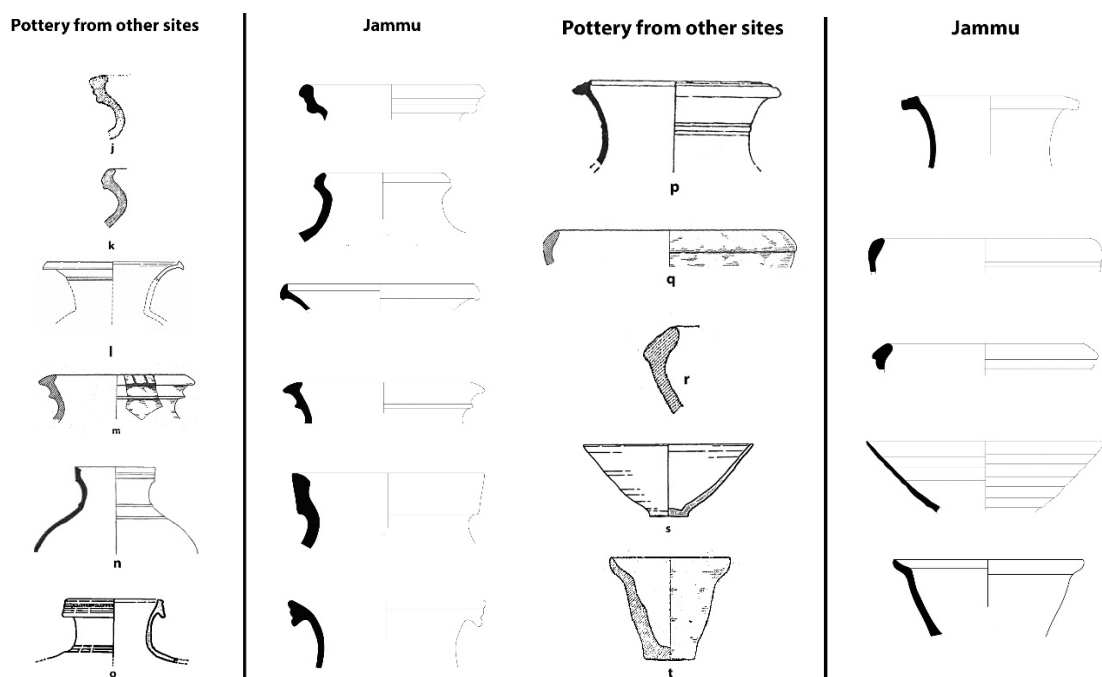


Figure V.45c: Representative comparative pottery from different sites belonging to Period IV  
j-k. Rangmahal (Rydh, 1959); l. Jetavana (Yoneda, 1997); m. Rangmahal (Rydh, 1959); n.  
Ahichchhatra (Ghosh & Panigrahi, 1946); o. Jetavana (Yoneda, 1997); p. Aktha (Jayaswal, 2009); q-r.  
Rangmahal (Rydh, 1959); s. Jetavana (Yoneda, 1997); t. Rangmahal (Rydh, 1959) (see Fig. V.38 to  
V.45, Table V.4)

Period IV further witnesses the increase in the number of sites.

Elaborate paintings on the rims and body parts of the vessels are now commonly found on the vessels. These are akin to the Rangmahal ceramic tradition, which, before the current research, had its northern boundaries confined to the plains of Punjab (Bala 1992: 99) and Haryana (Uesugi 2014). The existence of this pottery type in the research has added new dimension in the supra regional interactions with the other areas, mainly owing to its spatial location (Kour, 2018).

The terracotta mould found from this period further gives an insight of the socio-cultural advancement in the region.

The continuation of the rice husk impression on terracotta pieces in this period from sites belonging to the plain areas strengthens the assumption of the intra-zonal interactions.

### *V.5 Miscellaneous Artifacts*

In addition to the above-mentioned antiquities from section scraping and explored sites, cultural materials were recovered from a few more sites. The artifacts collected from these sites were however difficult to categorize confidently into different periods of cultural history. These artefacts are all important in tracing the region's general cultural development. Although, as previously noted, pinpointing the periods is challenging because these were discovered in an exploratory setting, they nonetheless shed light on the region's socio-cultural aspects. A gist of some of these important artefacts is illustrated below.

The two base sherds with shallow depression filled with intrusions (Fig. V.46 A and B) from the site of Satowali were indeed a curious find. Because of the challenges in knowing the functionality of the vessel, an XRF analysis was done on the constituent material from the shallow depression (Table V.5). The resultant values show the highest concentration of Iron (around 48%). It was, however, through ethnography that a vessel with same pattern was found, and the utility was understood in the present context (Appendix II).





Figure V.46: A and B – Vessel bases with small shallow depressions (Satowali)

Table V.5: XRF values of the constituent from the shallow depression from Satowali sherds

Nr	Ident		Seq	Time		Pos	Norm F	Al		Si		P	
								C	Unit	C	Unit	C	Unit
1	Unknown metal ( Navjot )		1/1	08-Feb-2019 02:24:19		Lge	1.721	9.459	%	27.888	%	0.822	%

Nr	S		Cl		K		Ca		Ti		V		Cr		Mn		Fe	
	C	Unit	C	Unit	C	Unit	C	Unit	C	Unit	C	Unit	C	Unit	C	Unit	C	Unit
1	0.058	%	0.515	%	4.834	%	6.431	%	0.538	%	0.014	%	0.020	%	0.069	%	48.870	%

Nr	Zn		Ga		Rb		Sr		Zr		Ag		Nd		Eu		Yb	
	C	Unit	C	Unit	C	Unit	C	Unit	C	Unit	C	Unit	C	Unit	C	Unit	C	Unit
1	0.008	%	0.004	%	0.059	%	0.052	%	0.027	%	0.125	%	0.014	%	0.130	%	0.037	%

Nr	Pb	
	C	Unit
1	0.026	%

The perforated sherd (Fig. V.47 A) discovered from the site of Biyan Tibba, probably served as a utility vessel although its principal role is difficult to ascertain. The decorative sherd from Satowali (Fig. V.47 B) which appears to be from a later period (later than Period IV), features a unique pattern that resembles a cross and a rosary symbol. The incised decorated sherd from Biyan Tibba (Fig. V.47 C) either belonging to Period III or IV, sheds light on the potters' approach on decorative patterns of pottery.

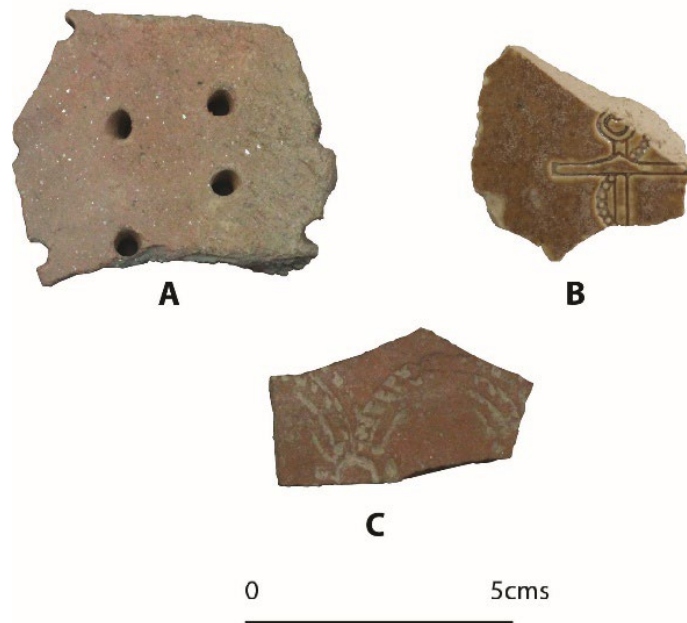


Figure V.47: A – Perforated ware (Biyan Tibba) B – Sherd with cross and rosary symbol(?) (Satowali)  
C – Sherd with incised decoration (Biyan Tibba)

The research area seems to have a strong base in terracotta-based industry which is shown by the following set of figures. The presence of pottery workshops in the area is shown by the dabbers. Dabbers, used in the pottery production process are reported from the site of Dohana Chak Tibba (Fig. V.48 A, B and C).

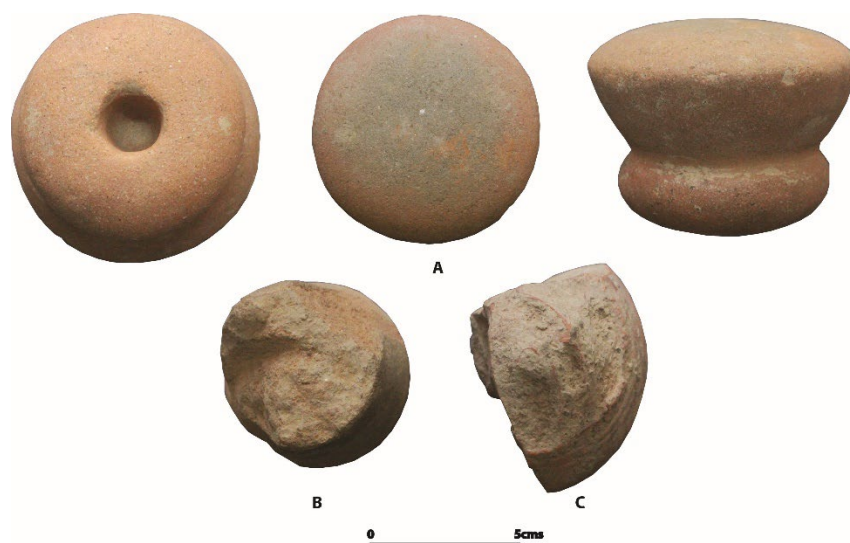


Figure V.48: A- Intact dabber from Dohana Chak Tibba B-C: Broken dabbers from Dohana Chak Tibba

The broken terracotta antiquities including terracotta figurines from the sites of Bansultan, Ghattala, Seri-Panditana and Biyan Tibba (V.49 A-D, G-I), intact terracotta pellet from the site of Khojipur Jhak (V.49 F) and a broken terracotta toy from Jindermelu Tibba (V.49 E), all are suggestive of the presence of local terracotta manufacturing units.

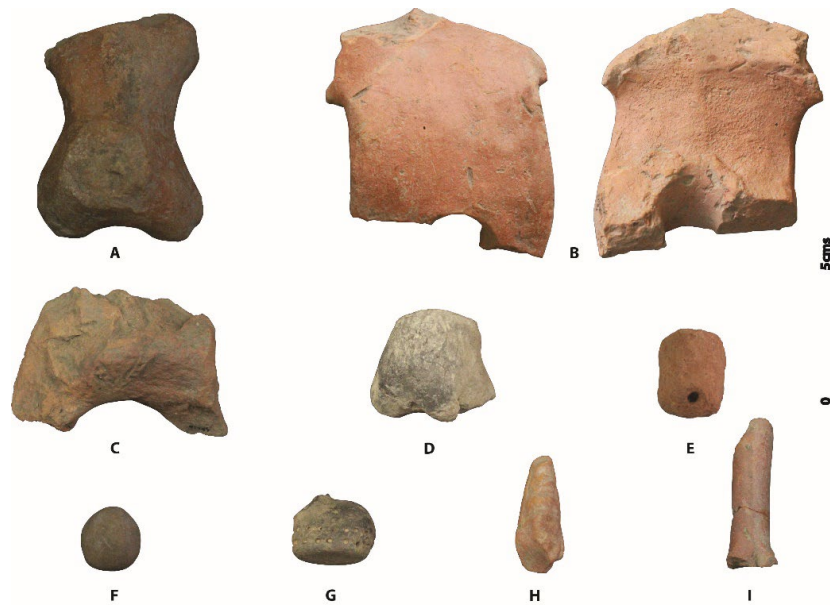


Figure V.49: A – Broken animal terracotta figurine (Bansultan) B – Unidentified terracotta figurine (Ghattala). C – Unidentified terracotta figurine with incised pattern (Seri Panditan) D – Broken animal terracotta figurine (Biyan Tibba) E – Broken terracotta toy (Jinder Melu Tibba) F – Terracotta pellet (Khojipur Jhak) G – Broken figurine of a seated animal (cattle?) (Satowali) H – Broken Terracotta piece (Satowali) I – Unidentified terracotta figurine (Tikri).

In addition to the local terracotta artifact production in the study region, which was very robust, its involvement in the intraregional trade is also noteworthy. This is seen from the sites of Satowali, Mana Tibba, Muggoali/Bla Tibba, Biyan Tibba and Dohana Chak Tibba which have given evidence of terracotta bangles and beads (Fig. V.50 A-E). The *Ghata* shaped bead (Fig. V.50 C and E) and the areca-nut bead (Fig. V.50 D) are mainly found in the Early Historic context, but difficult to ascertain the exact period. They do, however, emphasize the importance of local production. The carnelian bead (Fig. V.50 F) found from the site of Muggoali/Bla Tibba signify the element of inter-regional trade transactions as the raw material is not found in the region.

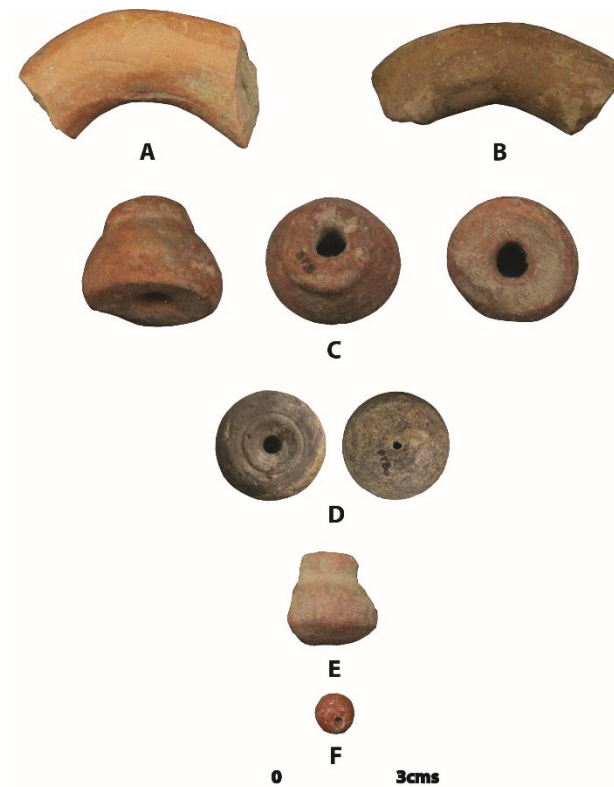


Figure V.50: A-Broken terracotta bangle (Satowali) B- Broken terracotta bangle (Mana Tibba)  
 C – Terracotta bead-lateral, top and bottom view (Muggoali/Bla Tibba) D – Terracotta bead (Biyan Tibba) E – Broken terracotta bead (Dohana Chak Tibba) F – Carnelian bead (Muggoali/Bla Tibba)

Terracotta hopscotches found from the sites of Mana Tibba, Abduleyan and Abdal (Fig. V.51 A-C) further strengthens the preposition of the presence of local terracotta industry. The exploration from the site of Muggoali/Bla Tibba also yielded a terracotta scrubber/paddle (Fig. V.51 D) either used for skin cleaning or to make pattern on the pottery.

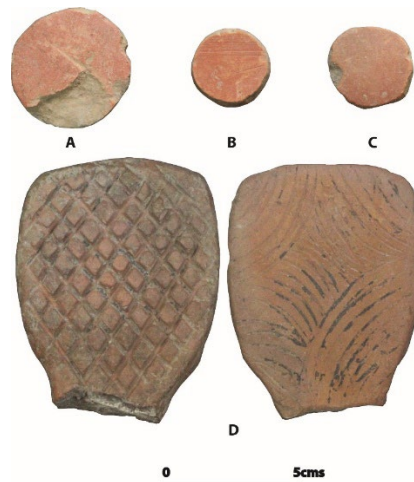


Figure V.51: A—C: Worked potsherds (from left to right- Mana Tibba, Abduleyan, Abdal)  
D –Terracotta Scrubber/Paddle (Muggoali/Bla Tibba)

Apart from terracotta, artifacts of stone were also discovered from the present explorations. Stone pestles used for crushing and grinding were collected from the site of Guru Baba ka Tibba (Fig. V.52 A-B).



Figure V.52- A-B: Stone pestles (Guru Baba ka Tibba)

Terracotta grinders were also collected from the explorations (Fig. V.53-55). The presence of a hopper on two of them indicates that they were employed for grinding purposes. The assumption that they weren't utilised for intensive grinding and were simply used to de-husk the grains, as the preliminary stage



of the grinding process, is primarily based on the raw material used to make these grinders i.e., terracotta.



Figure V.53: Small terracotta grinder (Satowali) – A: Front view B: Lateral view and C: Back view  
D: Grain impressions (rice) all over the grinder  
Note the black arrow marking the hopper signifying its identification as grinder



Figure V. 54- Terracotta grinders (Ghattala)-A: Front view B: Back view  
 C: Grain impressions (rice) on the back side  
 Note the black arrow marking the hopper signifying its identification as grinder





Figure V.55: Terracotta grinder (Prema Chak Tibba)- A: Front view B: Back view  
C: Grain impressions (rice) on the back side

These discussed artifacts therefore helped in understanding the socio-cultural developments of the region in the new light. The reconstruction of chronological periodisation based on tangible material culture as attempted in this chapter and the pattern of spatial temporal distribution of sites as discussed in the previous chapter were important research tool for the area. The composite data helped in the logical reconstruction of the settlement pattern of the study area as is discussed in the next chapter.