

Archaeological Exploration along the Right Bank of the Nara Canal from Phariaro to Kathore

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Introduction

While the present authors were investigating archaeological sites at the Thar and adjacent regions in the Khairpur district in 1992-93, they simultaneously initiated the 'Rohri Hills Project', which stretched our knowledge of the area back into the Palaeolithic period (Shaikh 1995; Shaikh *et al* 2001). The research was further extended to the west of sand dunes where sites of the Mesolithic and other periods were explored (Biagi and Veesar 1998-99). Keeping the nature of the survey in view, the exploration of the sand dunes was primarily based on: (a) location of sites, (b) geomorphology of the area (such as lakes or *dands* and valleys or *vero*) and (c) vegetation that continued to attract people in the remote past.

The present survey along the right-bank of the Nara canal resulted in the discovery of twenty-three sites and a historical graveyard (Fig. 1). The first site recorded at Phariaro, to the west of Gambal Shah village, led us to the discovery of three more situated further to its west (Table 1). The surface material from these sites consists of pottery—plain, painted and incised—and stone tools (Pl. 1; Table 2). A notable feature is that these sites were occupied and re-occupied at different periods.

Beyond Phariaro is lying the Ghangerko Vero (hereafter referred to as GOV) at a distance of two kilometres northwest of the Choondiko town. All the northern and eastern slopes of this valley were surveyed using a 4x4 jeep as well as on foot. We found three sites (GOV 5-7) within a kilometre. Originating near Baqar Shah and Matt area in the Rohri hills (communicated verbally by the local informants), a seasonal rivulet passing through the valley enhances its archaeological importance and which obviously provided subsistence to the people living here in ancient times. A detailed survey along the rivulet is needed to understand the archaeo-environmental set-up of the area. From here we picked up a variety of artefacts including plain and painted pottery, terracotta cakes and Chert stone-tools (Pls. 2-3).

Farther east and southeast of Choondiko, four sites were explored in the scattered sand dunes around the Bhai Khan Bhambhro village (BKB 8-11). The slopes as well as flat tops of the sand dunes seem to have been used for habitation in the past. The site of Pir Mozal Shah (PMS 12) yielded a hearth with pottery around it in situ. This discovery at such temporary sites is utmost important for providing samples for radiocarbon dating.

The area between Sorah and Kathore yielded a number of archaeological sites. Out of nine sites, three were recorded in the vicinity of Sorah (Nos. 13-15; Pls. 5-7) while six at the Kathore area (Nos. 16-21). These sites yielded pottery—plain, painted, stamped and incised—terracotta chess gamesman, a fragment of terracotta cake and a variety of Chert implements including a distinctive "trapeze and core" of the Mesolithic period (Pls. 8-10). The majority of the sites were recorded in neighbouring valleys, some of them appear to have been beds of the now dried lakes. Moving further south, two sites BOV 22-23 and a graveyard of historical period around Bhankio Vero were explored (Pls. 13-15).

A preliminary data-examination shows sequential utilisation of substantial subsistence resources of the region since the Mesolithic period onwards. Pottery of un-levigated clay mixed with terracotta crush of the Hakra period; typical Kot Dijian pottery with short neck and black band around; mature Indus period terracotta cakes, bangles and pottery; glazed pottery, iron fragments,

glass pieces and embroidery-mirrors suggest continuity of occupation at most of the sites down to the historic period.

Geomorphological Analysis of the Area

Mainly consisting of sand dunes, the area under investigation has alluvial plains of the Indus on the west, the Rohri hills on the northwest and the narrow Nara valley on the east (Fig. 2). The sand dunes along both the sides of the Nara valley having several lakes and small alluvial valleys mark the geomorphological character of the region. The Nara canal traverses this narrow alluvial belt and flows mainly along the eastern side of the valley. During the season of high floods, it fills lakes and valleys in the sand dunes. Marshy land and reed-thickets along the Nara once been the abode of crocodiles recall the Nile environment of Egypt. Regular flooding has created lakes and low depressions, known as spill channels, which are widely traceable in the area. Sometimes little water flows into the lakes from channels, which are known as *nar*. These channels and lakes provide drinking water for the most part of the year. The availability of sweet water has created an oasis in the desert (Pl. 11). After the introduction of barrage system, floodwater does not reach the lakes, which, therefore, are turning into alluvial valleys. Seasonal rivulets bringing rainwater from the Rohri hills towards the Nara valley irrigated a number of adjacent smaller valleys on the way. Although sparse vegetation of arid plants can be noticed on the sand dunes, monsoon rains increase the growth of various types of herbs and provide better pasturage for cattle and other animals. These resources must have attracted people for habitation in ancient times.

The Present Survey

We surveyed all possible types of geomorphological units carefully and documented twenty-four sites for critical study. Most of the sites located around lakes and valleys on the slopes of sand dunes comprised surface scatter with less cultural deposit signified nomadic and pastoral economy. Cultural objects belonging to different periods were mixed together that indicated repeated visits and occupation of the sites due to vital subsistence potential of the area.

Chronology

Chronology of the recently explored sites is determined by cross dating, based on morphological similarity of artefacts. Preliminary examination shows that the region has been in human occupation since the Mesolithic period (c. 9000 BC) to the present.

Only two sites (No. 16 and 17) have yielded the oldest archaeological remains, while the remaining were frequently inhabited from the Hakra period (c. 3300-2800 BC) onwards to the historic times. Chronologically, the Chert core and trapeze, as referred to above, clearly indicate the Mesolithic occupation (Allchin and Allchin 1982; Allchin *et al* 1988; Biagi and Veesar 1998-99). Pottery with rough texture, mixed with brickbats, and hand or wheel made is associated with the Hakra period (Mughal 1997), while that with short neck and blank band is typically Kot Dijian (Khan 1965). *Pipal* (Banyan) leaf motif and black painting on red slipped surface is associated with the mature Indus period. Besides specific chronological periods, Table-3 also mentions "Miscellaneous" as the last category—dating from 1900 BC to the medieval times—which has pottery with special characteristics making its instant analysis difficult.

Description of the Archaeological Sites

PHARIARO 1

Location: 27°-12'-49" North latitude and 68°-59'-55" East longitude

The site situated between Gambal Shah and Mallah Mohalla north-east of Phariaro town lies on the southern slopes of the sand dune where there is a lake watered by the Nara canal. Painted

and plain pottery, glass mirrors, etc., were collected from here. Since the surface collection does not reveal any diagnostic feature, its date remains yet to be determined.

PHARIARO 2

Location: 27°-13'-04" North latitude and 68°-59'-28" East longitude

The site is located to the north of Phariaro town on the flat tops of the sand dunes. Cultural material thinly scattering on the surface suggests temporary occupation, while the dry bed of a lake located to the west of the site is presently under cultivation. The Rohri hills, lying at a walking distance from the site, might have served as a quarry for obtaining Chert nodules for making stone tools.

Plain and appliqué' pottery and Chert stone flakes were collected from this site. Hakra and subsequent periods objects were collected that need a thorough investigation. The site, however, can be chronologically bracketed between the 4th and 2nd millennium BC.

PHARIARO 3

Location: 27°-12'-33" North latitude and 68°-58'-28" East longitude

The site occupies north-western side of the Phariaro town and lies on the flat top of a sand dune. The cultural material, which sparsely scattering on the surface, belongs to different periods suggesting seasonal halt of nomads. Nearby there is a dry lake, locally called Manchhar Lake, which is presently under cultivation.

The site yielded plain, painted and incised pottery as well as Chert flakes and glass embroidery mirrors. It can be associated with Hakra, 4th millennium BC, and subsequent historic periods down to modern times.

PHARIARO 4

Location: 27°-12'-33" North latitude and 68°-58'-28" East longitude

The site lies on the south-western of Phariaro town and occupies the southern slopes of a sand dune. The cultural material thinly scattered on the surface indicates that it might have been occupied for a short period.

The cultural material collected from the site includes painted, plain and appliqué' pottery, fragment of a terracotta cake and Chert flakes. Preliminary observation of the artefacts suggests occupation of the site since the Kot Dijjian period onwards.

GHANGHERKO VERO I

Location: 27°-11'-23" North latitude and 68°-57'-43" East longitude

This site located approximately two kilometres northwest of the Choondiko town occupies the southern slopes of sand dunes where there is the *vero*, as mentioned above, which is cultivated on its eastern side.

Cultural finds including plain, painted and stamped pottery, Chert flakes and blades suggests occupation of the site during the Hakra, the Indus and subsequent periods, i.e., 4th to 3rd millennium BC.

GHANGHERKO VERO 2

Location: 27°-11'-20" North latitude and 68°-57'-32" East longitude

The site lying to the west of Ghangherko Vero I on the slopes of the same sand dune. Artefacts thinly scattering on the surface indicated its temporary occupation and repetitive halting place for animal herders.

Analysis of finds points to the first occupation of the site in the Kot Dijjian period, 3rd millennium BC, however, the presence of glass beads indicates its reoccupation in modern times.

GHANGHERKO VERO 3

Location: 27°-11'-06" North latitude and 68°-58'-08" East longitude

The site, located about 400 metre to the northwest of Sher Muhammad Mangiro village on the western slopes of a sand dune, seems to have been dependent on resources of the area. The less concentrated material puts the site in the same archaeological context as that of others in the valley.

Cultural material includes plain, painted and incised pottery, a terracotta bead and Chert flakes. These objects are associated with different periods, from the Hakra to the modern times.

BHAI KHAN BHAMBHRO 1

Location: 27°-09'-57" North latitude and 68°-58'-54" East longitude

The site, located about half a kilometre from the residence of Ameer Bakhsh Bhambhro and a kilometre north of the Bhai Khan Bhambhro village, has artefacts scattered on the western slope of a sand dune, nearby which remains of an ancient spill channel were found. The cultural material includes plain, painted and incised pottery, Chert flakes and some glass pieces. Due to absence of its specific diagnostic features, it is difficult to date the site now.

BHAI KHAN BHAMBHRO 2

Location: 27°-08'-49" North latitude and 68°-59'-14" East longitude

The site, located about half a kilometre the south of the Bhai Khan Bhambhro village on the flat top of a sand dune, has cultural material scattered scarcely. Plain and appliqué' pottery and stone flakes were collected from here.

The cultural material associated with the Hakra and subsequent periods bracket the site between the 4th and 2nd millennium BC.

BHAI KHAN BHAMBHRO 3

Location: 27°-08'-42" North latitude and 68°-59'-20" East longitude

The site occupies the eastern slope of the same sand dune on which the preceding site is situated. The cultural material scatter sparsely on the surface, while ashy spots and dumps containing the refuse are very important for understanding the daily activities on the site.

Artefacts include plain, painted and incised pottery in addition to glass pieces. No object with diagnostic features has turned out to date the site approximately.

BHAI KHAN BHAMBHRO 4

Location: 27°-08'-35" North Latitude and 68°-59'-20" East longitude

The site, lying on the eastern slope of the same sand dune on which the above two sites are situated. The sporadic cultural material, indicating nomadic activity in the past, include plain, painted, incised and stamped pottery, fragment of a terracotta cake and some Chert flakes. The site, most probably, was occupied from the Hakra to the Kot Dijian period, ie., from the 4th to the 3rd millennium BC.

PIR MOZAL SHAH

Location: 27°-08'-02" North latitude and 68°-59'-20" East longitude

This site lying on low sand dunes, skirted with agricultural fields, is situated about half a kilometre to the east of the shrine of Pir Mozal Shah. Here a hearth with potsherds scattered around it was found in situ. Cultivation disturbing the thinly strewn cultural material on the surfaces has spoiled the archaeological context here.

Artefacts from the site include plain, painted and appliqué pottery as well as stone objects. Some of them are associated with the Hakra, while others to the latter periods and can be placed between the 4th and 2nd millennium BC.

SORAH 1

27°-06'-42" North latitude and 68°-56'-29" East longitude

The site lies on the eastern slopes of a sand dune where it has cultivated fields. The survey mark No. 61 stands here. The thinly scattered material includes plain, painted and appliqué' pottery and Chert blades and flakes. The artefacts reveal its association with the Hakra and Kot Dijjian periods.

SORAH 2

Location: 27°-05'-52" North latitude and 68°-56'-20" East longitude

The site is located on the southern slopes of a dune where it has an open valley. It seems that a spill channel might have crossed from here in ancient times. The cultural material spreading in a large quantity on the surface suggests the site had been an abode of nomads from the Thar desert.

Plain, painted and appliqué pottery, Chert blades and flakes were collected from here. Chronology of the site extends from the Hakra period, 4th millennium BC, down to historic and modern times.

SORAH 3

Location: 27°-03'-58" North latitude and 68°-56'-26" East longitude

The site lies on the western slopes of a sand dune where there is an open valley, presently under cultivation. The cultural material thickly scattered on the surface of the site indicates its occupation for a longer period. The surface finds include painted and appliqué' pottery, terracotta chess-man, Chert blade and flake. On the basis of finds, the site is dated from the Hakra to the Kot Dijjian period (from the 4th to 3rd millennium BC).

KATHORE 1

Location: 27°-01'-19" North latitude and 68°-54'-31" East longitude

Located at a distance of half a kilometre north of the Sodhra village on the southern slopes of sand dunes, the site Kathore 1 has an open valley in its southeast perhaps flooded by the Nara canal during the season. Surface finds comprise plain, appliqué' and painted pottery, Chert cores and flakes. The site might have been occupied from the Mesolithic through to the mature Indus period (10th to 3rd millennium BC).

KATHORE 2

Location: 27°-00'-10" North latitude and 68°-54'-37" East longitude

The site occupying the southern slopes of a sand dunes has a lake on its south and the Company road on its west. The 'Oil and Gas Exploration Company' has fixed a survey mark No. 213 on the site. As usual, the surface collection includes plain, glazed, incised and painted pottery, terracotta cakes, Chert blade and flake. The site may tentatively be dated to 4th millennium BC, but occupation of historic and modern times is also attested.

KATHORE 3

Location: 26°-57'-36" North latitude and 68°-53'-04" East longitude

The site occupying the southern slopes of a sand dune has cultural material thinly scattered on its surface. Plain, appliqué' and painted pottery picked up from here indicates occupation of the site from the Hakra period down to the present time.

KATHORE 4

Location: 26°-58'-31" North latitude and 68°-52'-43" East longitude

The site is located on the southern and western slopes of a sand dune where the road leading to Thari passes. Thinly scattered surface finds, including pottery usually found at other sites, date it from the Hakra (4th millennium BC) to the modern period.

KATHORE 5

Location: 27°-04'-01" North latitude and 68°-55'-30" East longitude

The site situated on the left of the track leading to the 'Oil and Gas Exploration Company' has on its south an open valley, which is used for farming. Thin scatter of surface material, indicating seasonal occupation of the site, includes pottery—plain, painted, glazed, incised and stamped—terracotta bead and Chert blades and flakes. The site was perhaps occupied from the Mesolithic to the Mature Indus period.

KATHORE 6

27°-03'-16" North latitude and 68°-55'-15" East longitude

This site lies on the flat top of a sand dune, situated on the right of the track leading to the 'Oil and Gas Company'. Sparsely scattered artefacts indicate seasonal occupation of the site by animal breeders. Plain and painted potsherds from here cannot determine probable date for occupation at this stage due to want of diagnostic features.

BHANKIO VERO 1

Location: 26°-57'-11" North latitude and 68°-53'-06" East longitude

This settlement site situated on the north of Bhankio Vero presents cultural material comparatively in good concentration indicating regular seasonal occupation of the site. An analogy is a goat herder's hut, locally called "Wandh", lying at a distance of about 200 metres from here and who live there round the year depending on herding. The ethno-archaeology can only be established by thorough documentation of sites in and around the area. A variety of pottery—plain, painted and glazed—terracotta cakes and Chert flakes were picked up site, which can be dated from the Mature Indus the historic period.

BHANKIO VERO 2

Location: 26°-57'-09" North latitude and 68°-53'-24" East longitude

Lying at a distance of half a kilometre to the east of Bhankio Vero1, this site also has a similar environment of a sand dune and orientation to the valley. Surface collection from here is thin and reveals pottery types similar to those from other sites in the area. Occupation of the site may be suggested onwards from the Mature Indus period to the present.

Summary

The present small-scale archaeological survey, being part of the series of exploratory work conducted in different corners of the Thar Desert, has yielded promising results. Each survey is an additional effort towards contributing new chapters to the history of the Indus Valley Civilisation. The recently explored sites highlight the potential of man for exploiting available resources in a given natural environment, which reflects nomadic and pastoral life styles through the ages. No exotic item was discovered to have suggested trade links between urban communities and the rural populations. It does not, however, mean that these people were culturally cut off the civic life completely. They might have exchanged perishable items like animal and plant by-products and honey with grains, pottery and other objects of the daily use. It is apparent that the locally available

raw material were fully taken advantage of whereas the Chert nodules were quarried from the nearby Rohri hills. This research, still in progress, should bring more information about the ancient settlement pattern and economy of the region concerned.

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Table 1. Coordinates of Sites

Site No.	Name of Site	Abbreviation	Latitude: North	Longitude: East
1.	Phariaro-1	PO1	27°-12'-49"	68°-59'-55"
2.	Phariaro-2	PO2	27°-13'-04"	68°-29'-28"
3.	Phariaro-3	PO3	27°-12'-33"	68°-58'-38"
4.	Phariaro-4	P4	27°-12'-31"	68°-58'-28"
5.	Ghangharko Vero-1	GOV1	27°-11'-23"	68°-57'-43"
6.	Ghangharko Vero-2	GOV2	27°-20'-20"	68°-57'-32"
7.	Ghangharko Vero-3	GOV3	27°-11'-06"	68°-58'-08"
8.	Bhai Khan Bhambhro-1	BKB1	27°-09'-57"	68°-58'-54"
9.	Bhai Khan Bhambhro-2	BKB2	27°-08'-49"	68°-59'-14"
10.	Bhai Khan Bhambhro-3	BKB3	27°-08'-42"	68°-59'-20"
11.	Bhai Khan Bhambhro-4	BKB4	27°-08'-35"	68°-59'-20"
12.	Pir Mozal Shah	PMS	27°-08'-02"	68°-58'-37"
13.	Sorah-1	SH1	27°-06'-42"	68°-56'-29"
14.	Sorah-2	SH2	27°-05'-52"	68°-56'-20"
15.	Sorah-3	SH3	27°-03'-58"	68°-56'-26"
16.	Kathore-1	KE1	27°-01'-19"	68°-54'-31"
17.	Kathore-2	KE2	27°-00'-10"	68°-54'-37"
18.	Kathore-3	KE3	27°-57'-36"	68°-53'-04"
19.	Kathore-4	KE4	27°-58'-31"	68°-52'-43"
20.	Kathore-5	KE5	27°-04'-01"	68°-55'-03"
21.	Kathore-6	KE6	27°-03'-16"	68°-55'-15"
22.	Bhankio Vero-1	BOV1	27°-57'-11"	68°-53'-06"
23.	Bhankio Vero-2	BOV2	27°-57'-09"	68°-53'-24"
24.	Bhankio	Graveyard	27°-56'-47"	68°-53'-25"

Table 3: Chronological significance of Sites

SITE NO.	ABBREVIATION	MESOLITHIC PERIOD	HAKRA PERIOD	KOT DIJIAN PERIOD	MATURE INDUS PERIOD	MISC.
1.	PO1	----	----	----	----	X
2.	PO2	----	X	----	----	X
3.	PO3	----	X	----	----	X
4.	PO4	X	----	X	X	X
5.	GOV1	----	X	----	X	X
6.	GOV2	----	----	X	X	X
7.	GOV3	----	X	----	----	X
8.	BKB1	----	----	----	----	X
9.	BKB2	----	X	----	----	X
10.	BKB3	----	----	----	----	X
11.	BKB4	----	X	X	----	----
12.	PMS	----	X	----	----	X
13.	SH1	----	X	X	----	X
14.	SH2	----	X	----	----	X
15.	SH3	----	X	X	----	----
16.	KE1	X	X	X	X	----
17.	KE2	X	X	X	X	X
18.	KE3	----	X	----	----	X
19.	KE4	----	X	X	----	X
20.	KE5	X	----	----	X	X
21.	KE6	----	----	----	----	X
22.	BOV1	----	----	----	X	X
23.	BOV2	----	----	----	X	X
24.	Graveyard	----	----	----	----	----

Legends: x = Present ---- = Absent

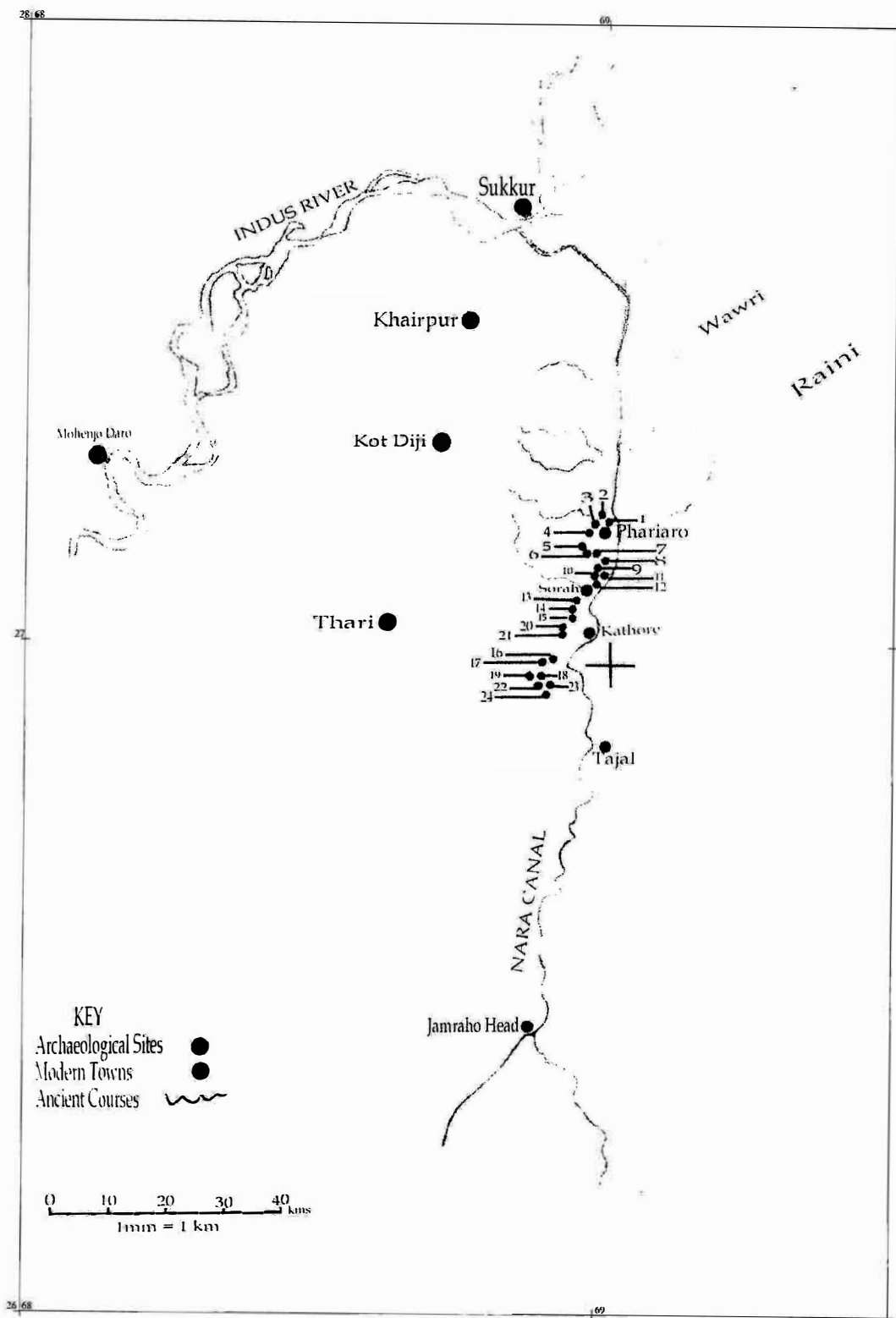


Fig. 1: Map showing the Archaeological sites.

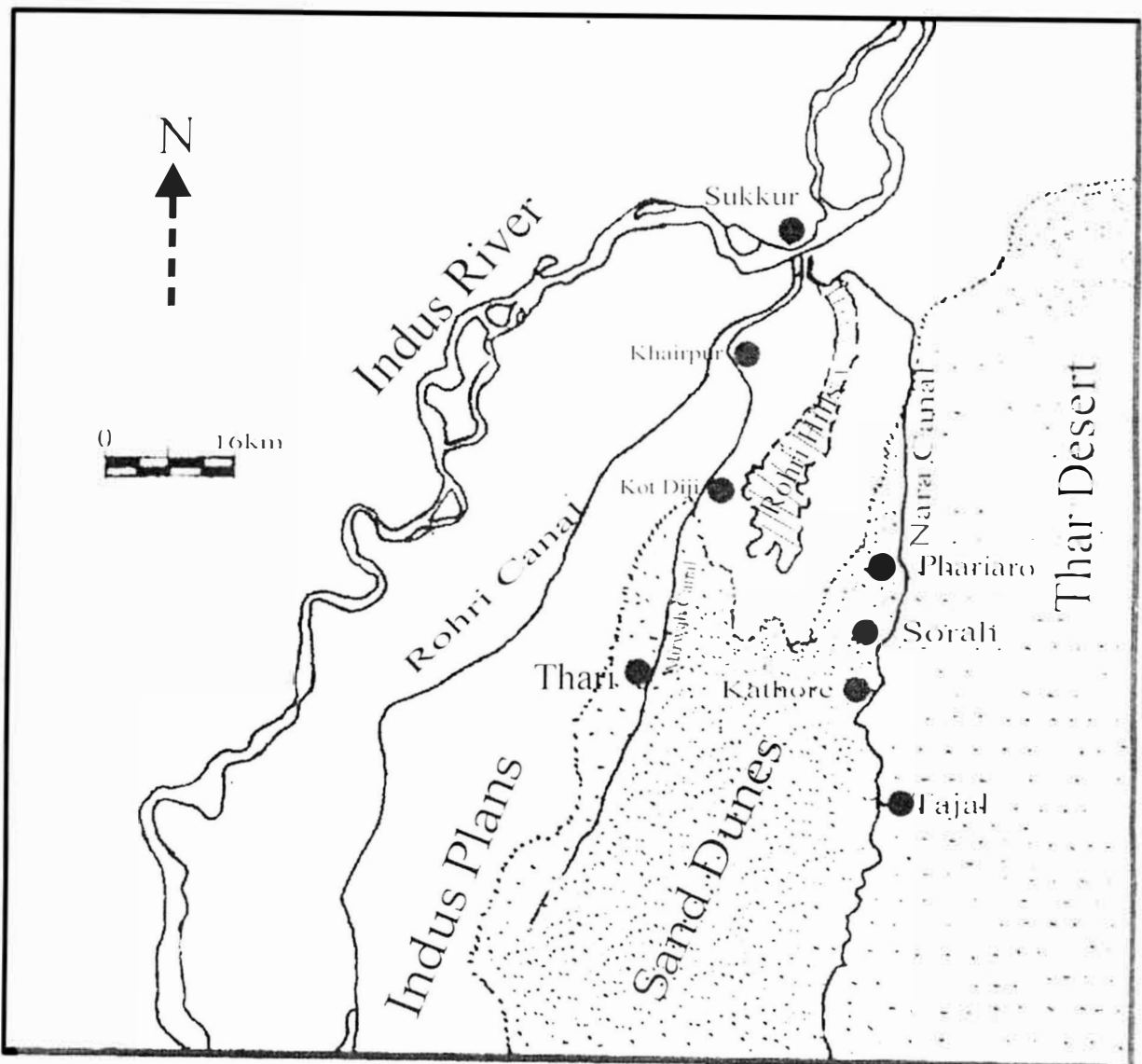
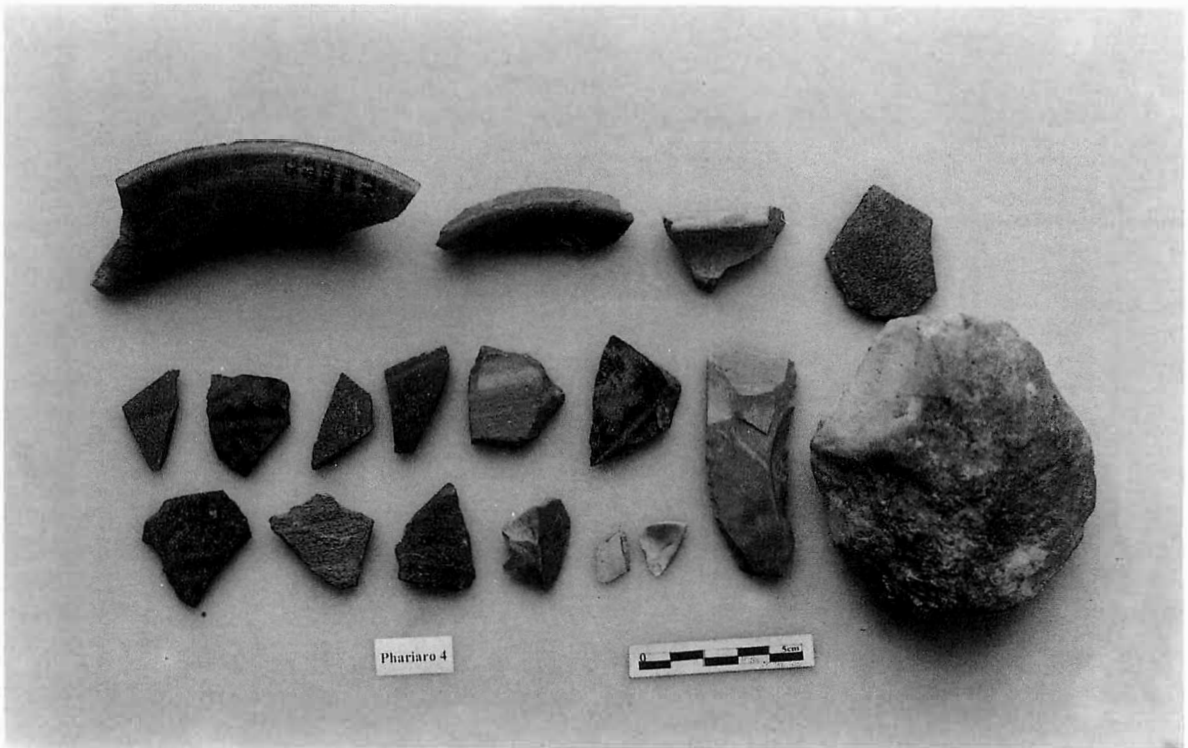


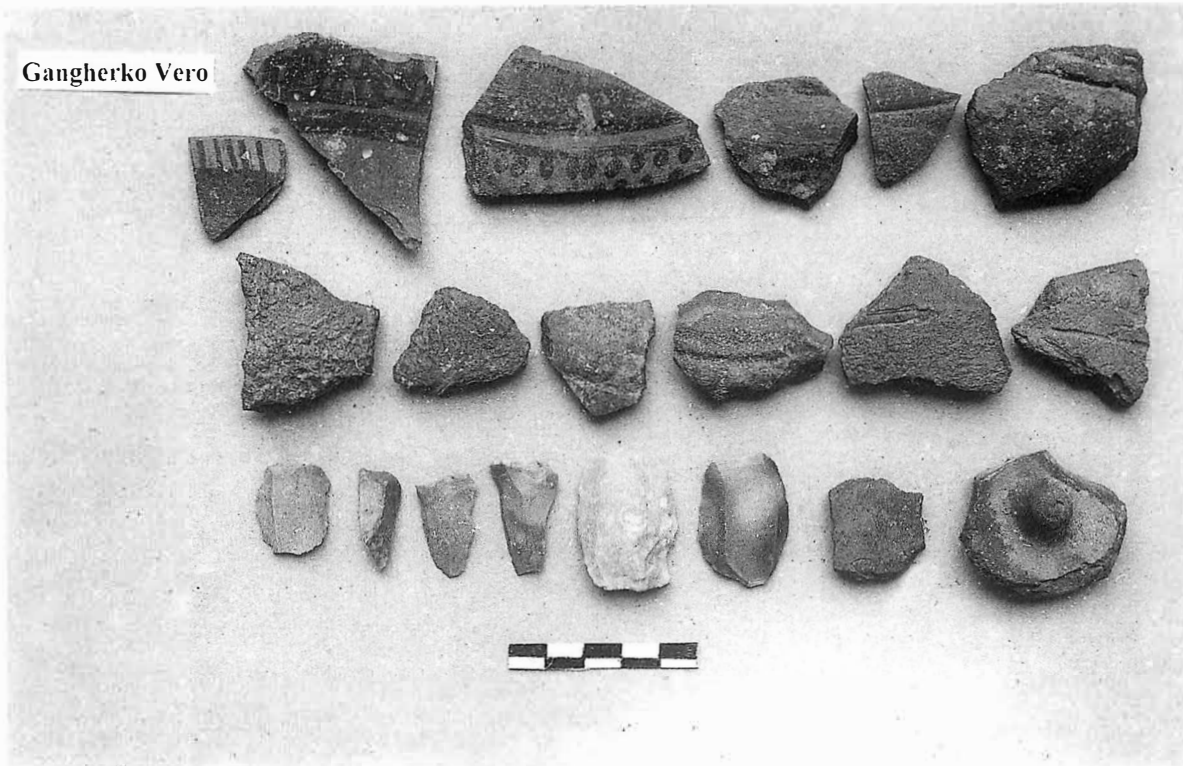
Fig. 2: Map showing main Geomorphological features.



Pl. 1: Phariaro 3: Pottery and stone tools.



Pl. 2: Phariaro 4: Pottery and stone tools.



Pl. 3: Ghangharko Vero 1: Pottery and stone tools.



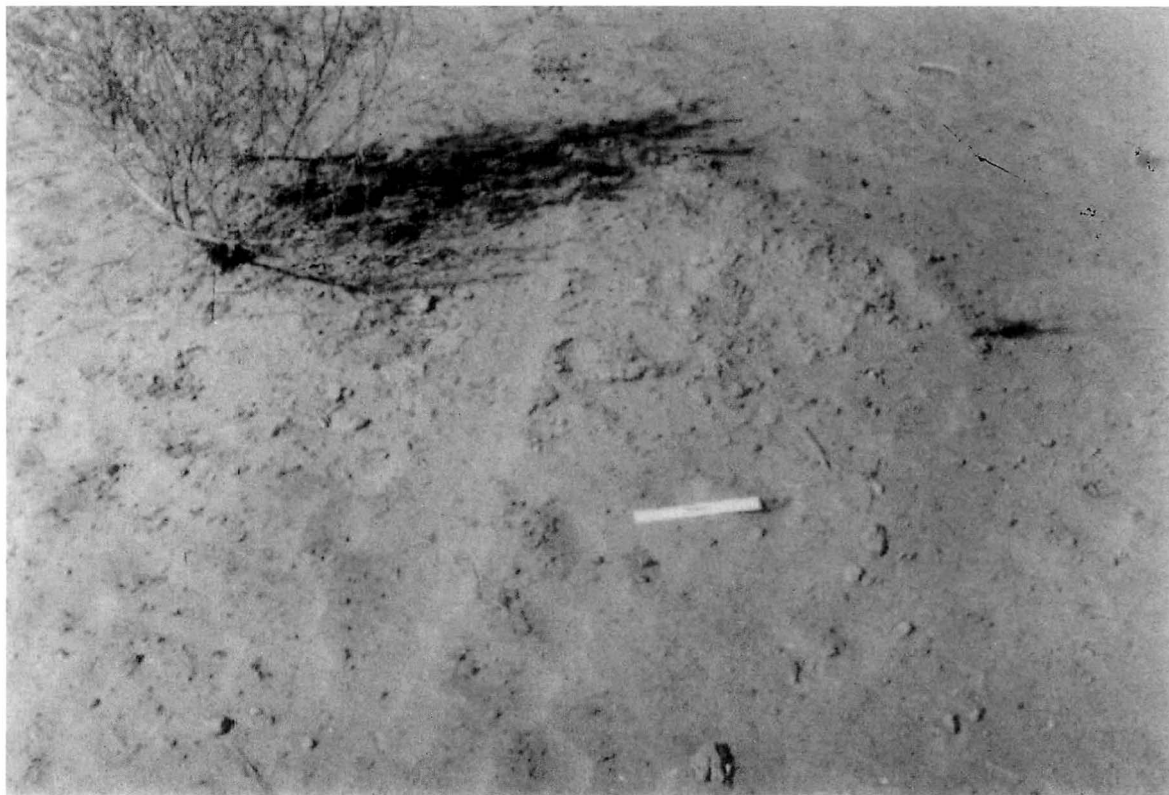
Pl. 4: Ghangharko Vero 2: Pottery, stone tools and terracotta cake pieces.



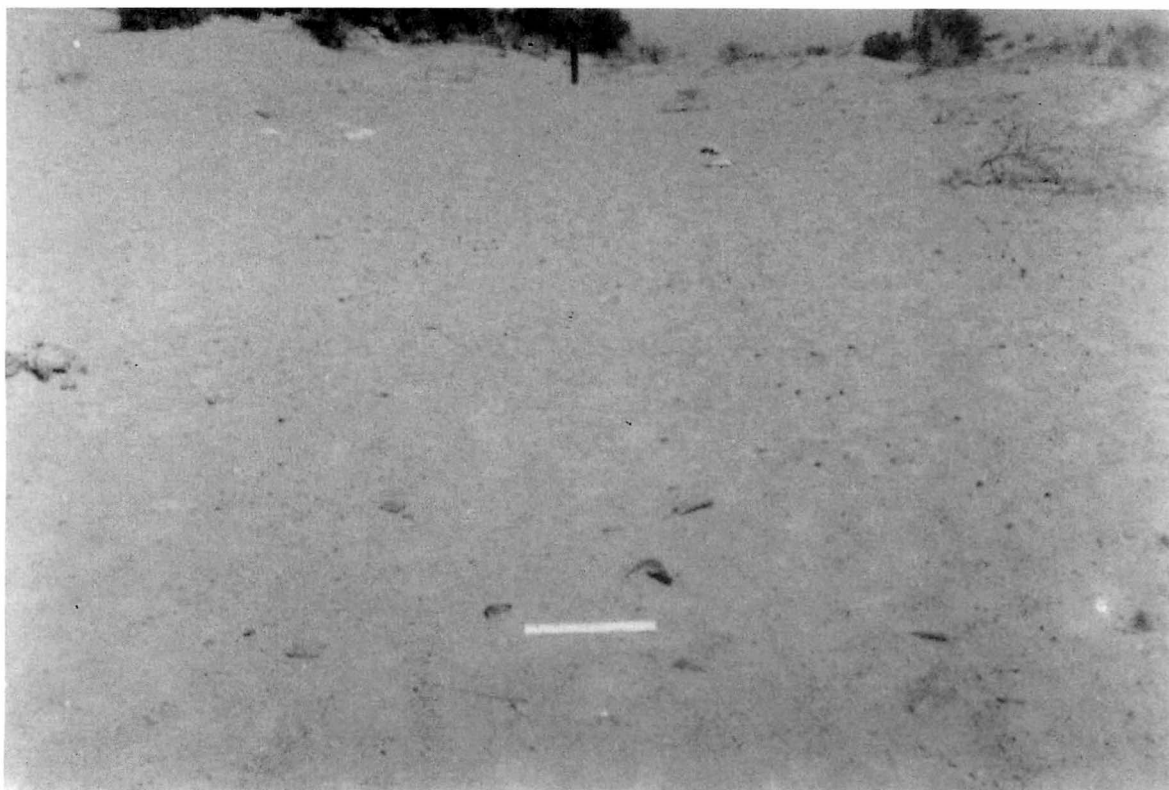
Pl. 5: Bhai Khan Bahmbhro 1: Artefacts collected from the site.



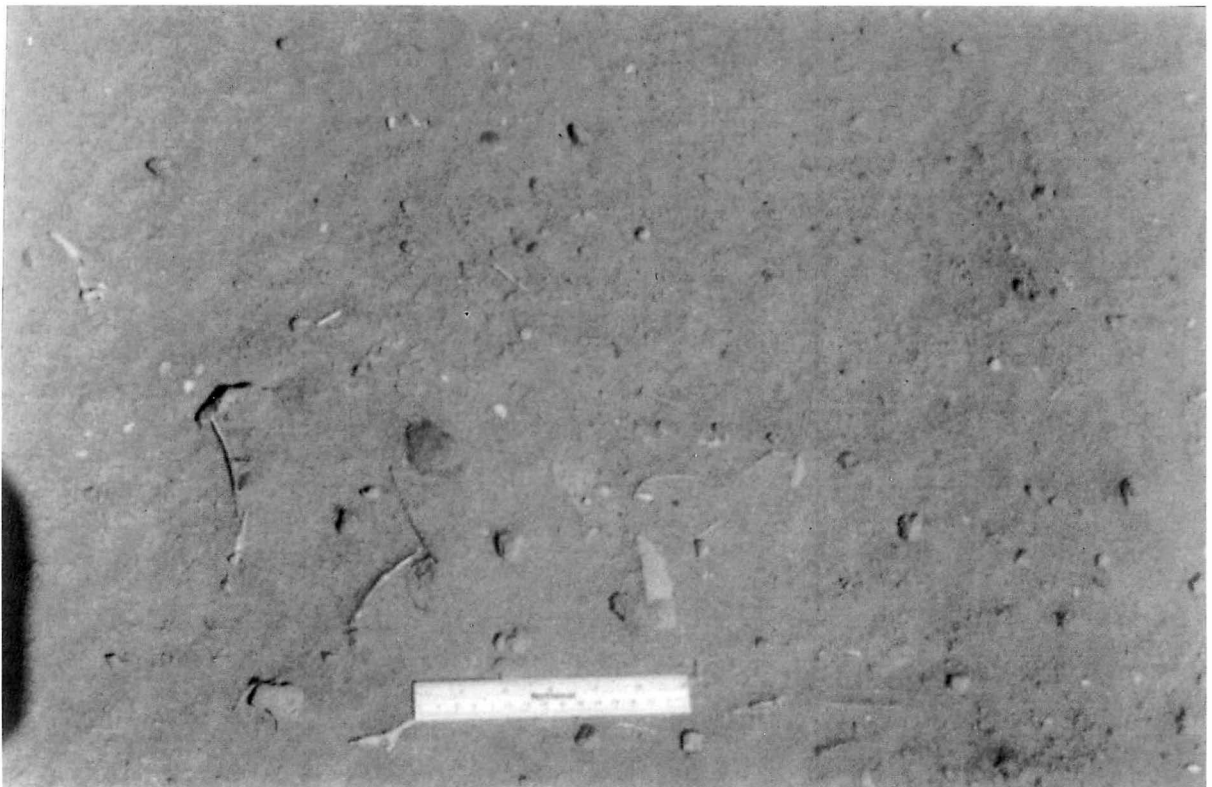
Pl. 6: Bhai Khan Bahmbhro 2: Artefacts collected from the site.



Pl. 7: Pir Mozal Shah: Archaeological material scattered on the surface.



Pl. 8: Sorah 1: Thinly scattered cultural material on the surface of the site.



Pl. 9: Sorah 3: Artefacts scattered on the surface.



Pl. 10: Sorah 3: Pottery, stone tools and terracotta chessman



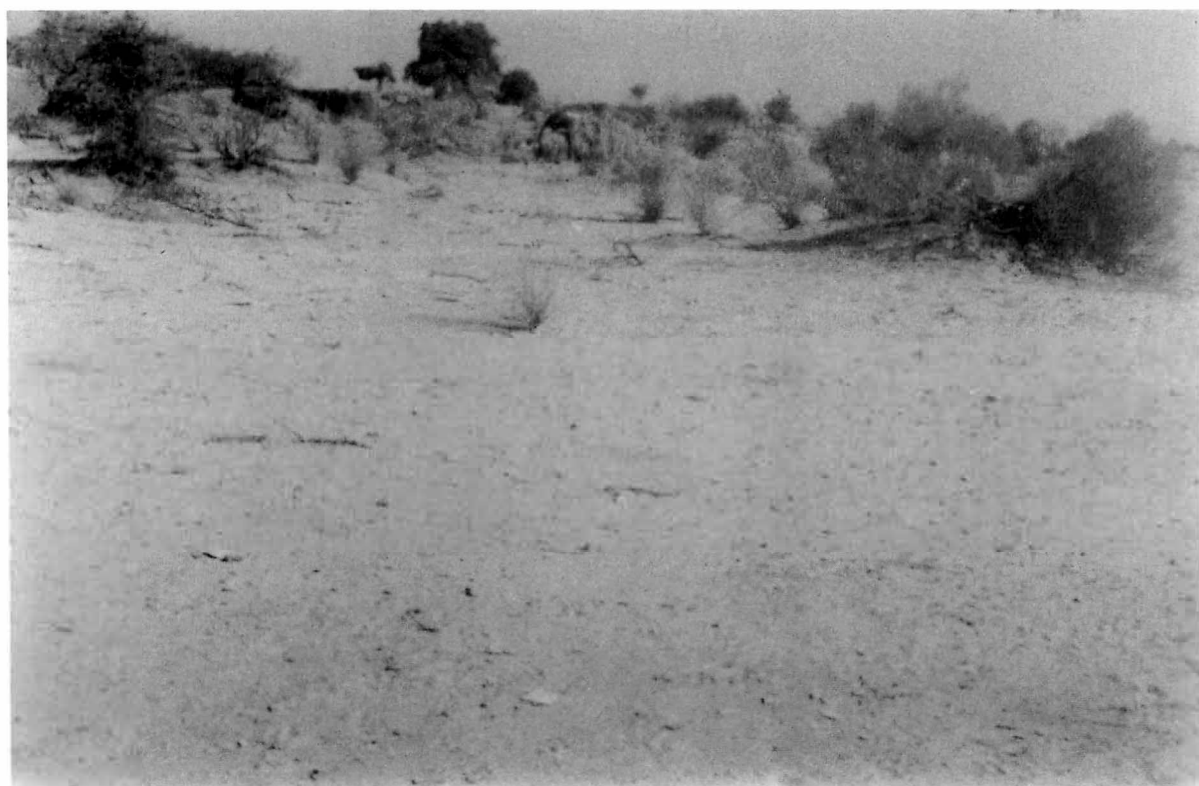
Pl. 11: Kathore 1: Pottery and stone tools



Pl. 12: Kathore 2: Pottery (plain, painted and glazed), stone tools and terracotta cake pieces



Pl. 13: Kathore 5: Pottery, stone tools and a terracotta broken bead



Pl. 14: Bhandio Verol: Artefacts scattered on the surface of the site