

Excavations at Bokhira (Porbandar) on the Saurashtra Coast

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Abstract

Excavations at Bokhira (Porbandar) on the Saurashtra coast revealed a Protohistoric settlement dating back to the mid 3rd millennium B.C. Four trenches were laid in agricultural land where a habitational deposit of 50 cm was noticed. A large quantity of pottery, animal bones and other antiquities similar to those reported from Bet Dwaika, Rojdi and Rangpur were found at the site. The place being close to a creek must have been suitable for maritime activities and would have served as a safe harbour. A few ancient jetties have been reported earlier along the Porbandar creek.

Introduction

With the exception of the Okhamandal region, the south-western coast of Saurashtra has not been studied in detail from the archaeological point of view. However, recent explorations suggest that the Saurashtra coast has played a key role in development of human civilization in the Indian Subcontinent. Harappans were the first to establish their colonies at Nageshwar (Hegde *et al.* 1990), Prabhas Patan (Sankalia 1974), Padri (Shinde 1992) and Lothal (Rao 1979) on the Saurashtra coast. Extensive archaeological excavations indicate that most of these sites were engaged in maritime activities in the past. Several Late Harappan sites have also been noticed on this coast. During the historical period, several ports were active, which find mention in Indian and foreign accounts. These include Dwarka (Gaur *et al.* 2004), Bet Dwarka, Porbandar (Gaur *et al.* 2004a), Prabhas Patan, and Hatab (Pramanik 2004) amongst others. These finds prompted us to look for similar sites on the Saurashtra peninsula, in particular along the coast. Explorations were conducted in November 2004 along the southwestern coast of the Saurashtra, as a result of which a site was located on the western side of the Porbandar Creek (Fig. 1). It is presently under cultivation. There is a well-defined depression around the site towards the creek, which is presently flanked by a high metal road. According to local traditions, there was a *Juna Dhakka* (ancient jetty), which indicates that the site was very close to a jetty site in the past. The location of the study area clearly favours the utilisation of the creek for maritime activities around Porbandar.

Results

Four locations were selected for excavations to assess the settlement extension and total cultural deposit. Three of them were laid on the eastern side of an ice factory, while the fourth was laid on the southwestern side of the factory. The details of each site are given below.

Trench 1

The trench is located in the middle of an agriculture field and measures 5 x 5 m. A total habitational deposit of 62 cm was excavated. Habitation took place on the natural limestone bedrock, which slopes to the east. Two postholes were noticed on this bedrock (Fig. 2) having diameters of 30 cm and 20 cm and depths of 25 cm and 15 cm respectively. A disturbed structure was exposed on the eastern corner of the trench with a total length of 2.5 m and width of 50 cm (Fig. 3). Only one course survives. The structure is oriented north-south and is made of small irregular limestone blocks. A large quantity of Late Harappan pottery was noticed in the entire sequence. Important shapes include convex sided bowls, dishes and jars. A few potshards have paintings on the exterior.

Trench 2

A trench measuring 2.5 x 2.5 m was laid to the northeast of Trench 1. A habitational deposit was noticed up to a depth of 48 cm. A disturbed structure was also observed on the southern section. As in Trench 1, habitation took place on the bedrock, which was also used as working floor. Pottery is similar to that reported in Trench 1.

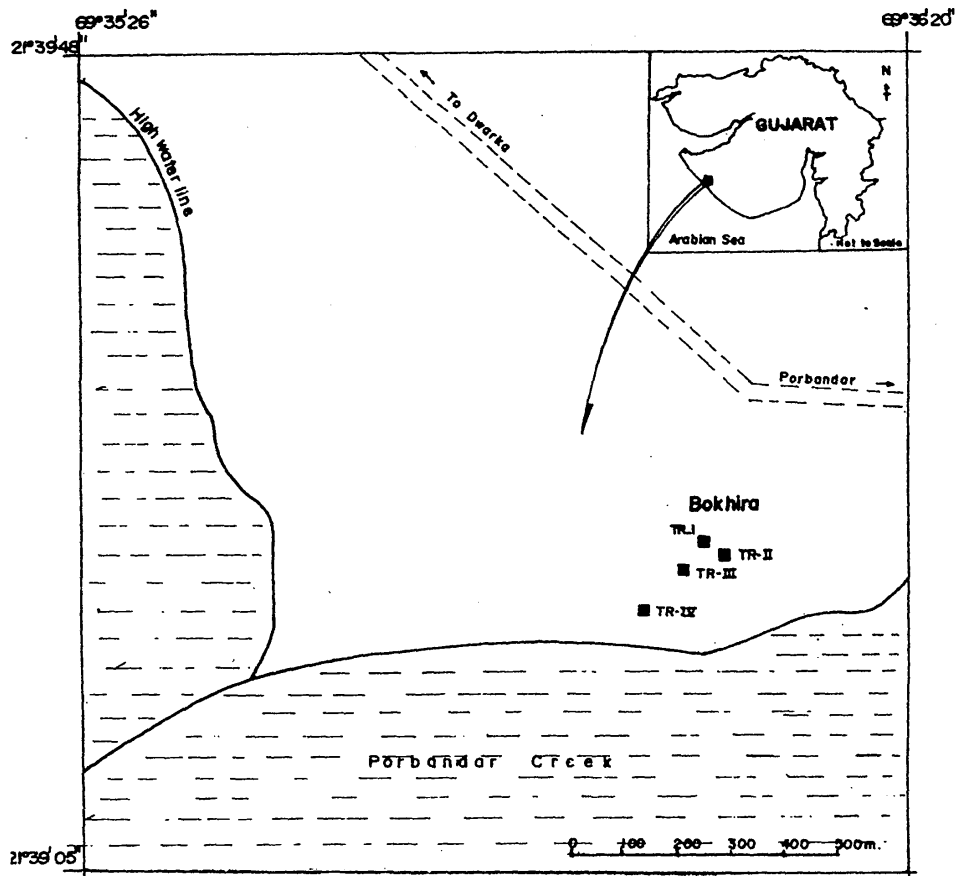


Fig. 1: Location of the trenches at Bokhira



Fig. 2: Bokhira: post holes in trench 1



Fig. 3: Bokhira: structure seen in trench 1

Trench 3

The trench was laid south of the trench 1 and measures 2.5 x 2.5 m. A total habitational deposit of 70 cm was recorded and three layers were identified. A structure appeared on the northeast corner of the trench. The structure was sealed by layer 2 and continues through layer 3, resting over the bedrock. The structure is oriented east-west and is 1 m long and 20 cm in height. Potsherds are similar to those found in Trenches 1 and 2.

Trench 4

This trench was laid around 110 m from the modern creek and to the south of the Minaxi Ice Factory, and aimed at tracing remains of any port installations. A total habitational deposit of 103 cm was recorded and five layers were identified. The pottery is very similar to that in the other trenches. A broken terracotta bead was found. Interestingly, a very hard and compact layer was noticed (designated Number 3) and was sampled, analysis of which will be done.

Pottery

The important ceramic assemblages are red ware, black ware, buff ware and grey ware. A variety of bowls of different sizes was an important discovery, as also a large number of sherds of jars, lids, basins and other pots. The shape, size and paintings are very similar to that reported from Bet Dwarka (Gaur *et al.* 2005), Rojdi (Possehl and Raval 1989), Lothal (Rao 1985) and Kuntasi (Dhavalikar *et al.* 1996). Important paintings on the potsherds (Fig. 4) are roundels, wavy lines, cross lines and thick bands on the rim portions.

Other Antiquities

Important antiquities include four stone tools, four terracotta beads, two balls, three sling balls, one copper finger-ring and two terracotta artefacts. A brief description of the antiquities is given below:

Stone tools (Fig. 5)

1. Point in milky quartz. Six flake scars are noticeable. The tip is broken. It has sharp edges, and measures 24 x 13.4 mm.
2. Blade on crystal quartz. One flake scar is noticeable. A prominent and positive bulb of percussion is seen. It has sharp edges and measure 34.5 mm x 23 mm.
3. Fluted core on milky quartz. Three flake scars are noticeable. It measures 41.5 x 39.5 mm.
4. Waste piece on milky quartz, with sharp edges, and measuring 46.5 mm x 31 mm.

Beads and balls (Fig. 6)

1. Broken truncated bicone circular bead, with a smooth surface, and a thick axial hole. It has a coarse fabric and is ill fired. It has a diameter of 34 mm, height 25 mm, and the diameter of the hole on one side is 10 mm and other side 7 mm (BKR-TR-1).
2. Terracotta bead with a wide axial hole. It has a carinated shoulder, and a smooth surface, and is treated with red wash. It has a fine fabric and is well fired. The diameter is 40 mm, with a height of 25 mm, and the width of the hole is 15 mm. Similar beads have been reported from Rojdi (Possehl and Raval 1989, Fig. 80.2) and Kuntasi where they have been called ear studs (Dhavalikar *et al.* 1996, Fig. 7.52: 31-32) (BKR-TR-4).
3. Spheroid broken circular bead. It has a rough surface, and is treated with a white colored slip which has flaked off at places. It has a coarse fabric and is well fired. It has a diameter of 33.5 mm, height 23 mm, and the width of the axial hole is 13 mm (BKR-TR-4).

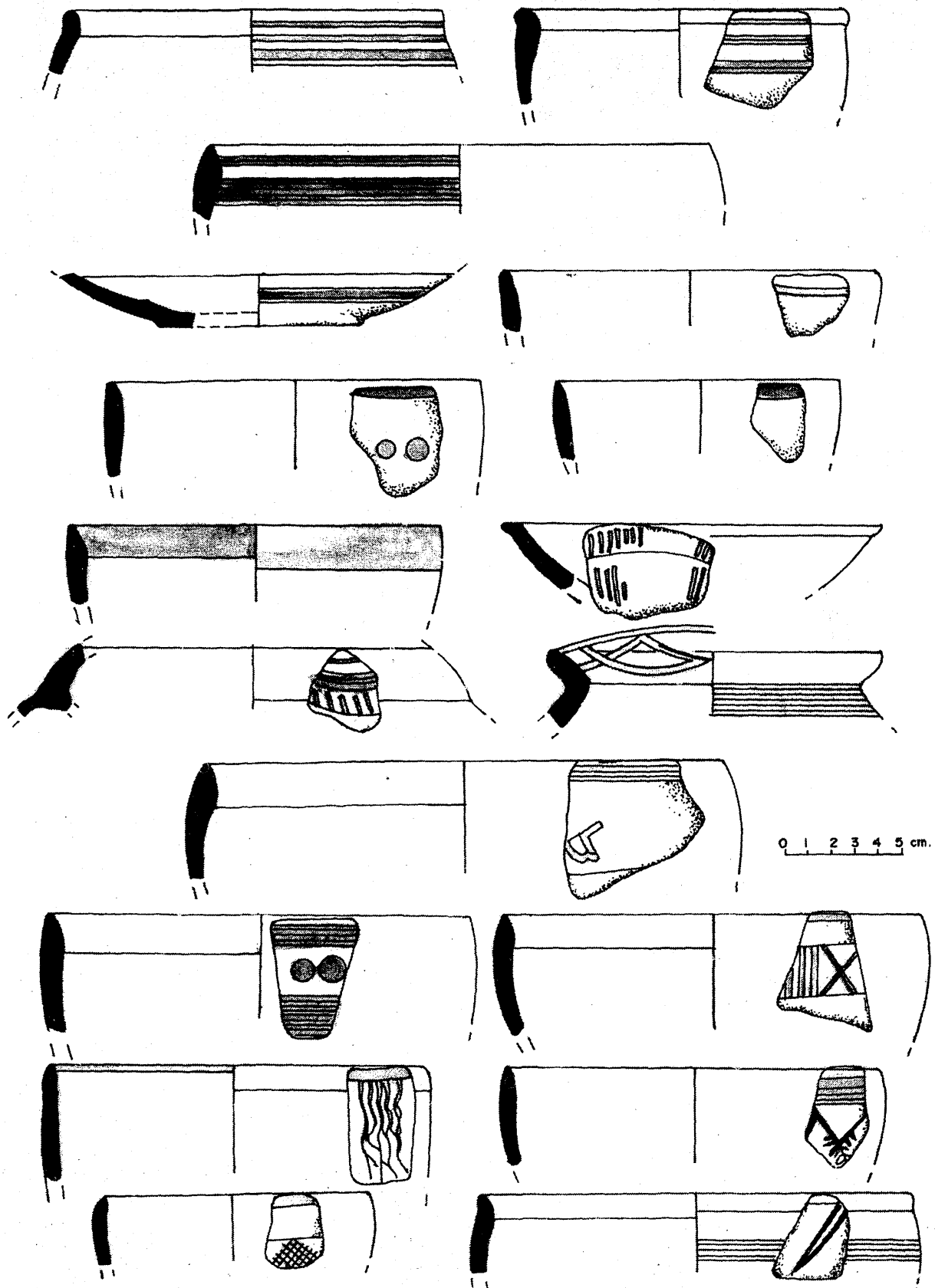


Fig. 4: Bokhira: the pottery

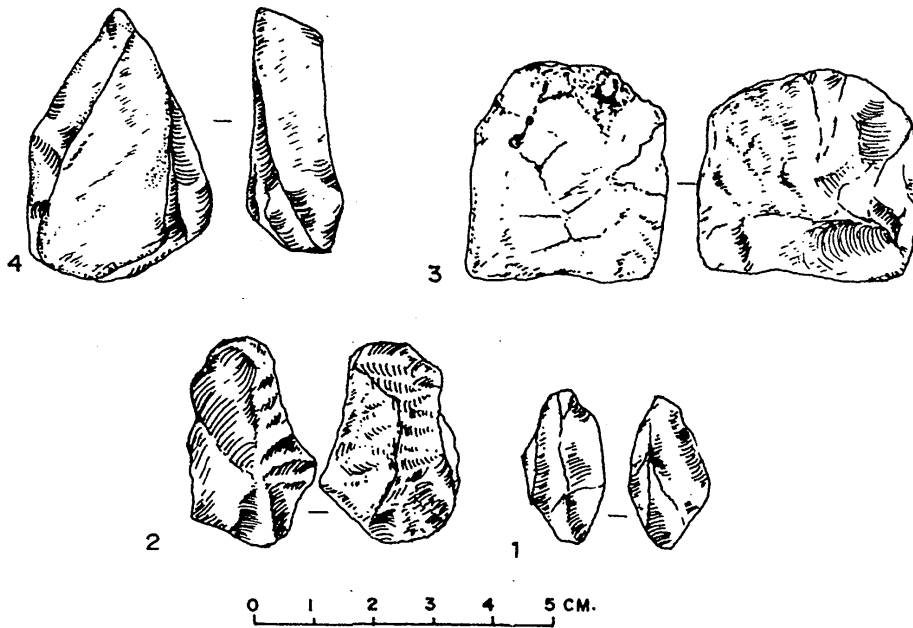


Fig. 5: Bokhira: the stone tools

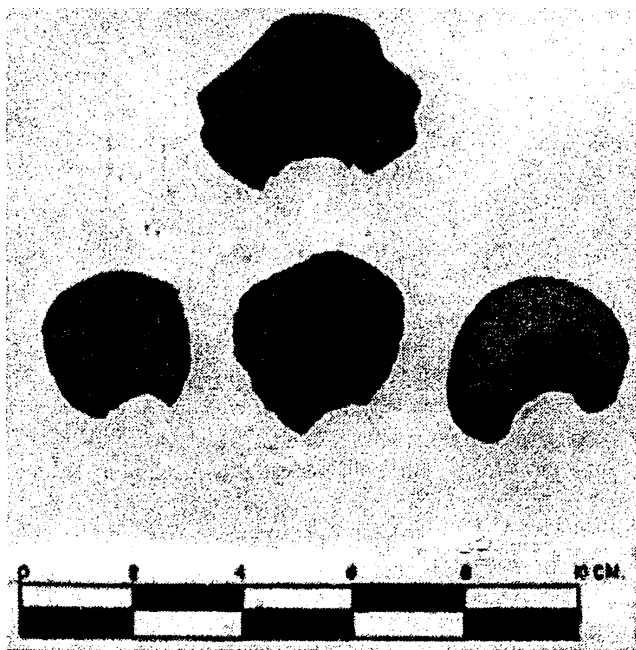


Fig. 6: Bokhira: terracotta beads

4. Broken truncated bicone bead of sun dried clay, with a smooth surface. The diameter is 34 mm, height 20 mm and width of the hole is 11 mm (BKR-TR-3).
5. Stone ball, with a smooth surface. The diameter is 25 mm (BKR-SUR).

5. Broken terracotta ball with a rough surface. The diameter is 29 mm (BKR-TR-1).

Copper object

Copper finger ring with a heart shaped pendant on it. The outer diameter is 21 mm, and inner diameter is 15 mm (BKR-TR-1).

Sling balls (Fig. 7)

1. Sling ball of limestone, with a rough and porous surface. The diameter is 52 mm (BKR-TR-1).
2. Sling ball of limestone. It is irregularly shaped with a rough surface. The diameter is 42 mm (BKR-SUR).
3. Irregular sling ball of limestone, with a rough and porous surface. The diameter is 41 mm (BKR-TR-3).

Chronology

The excavation revealed for the first time, the oldest antiquities around Porbandar, which date back to the beginning of the 2nd millennium B.C. The archaeological material is very similar to that reported from Rangpur IIB and IIC, Rojdi C and Bet Dwarka. Pottery is very similar to that of the Sorath Harappan suggested by Possehl in Rojdi, which has been well dated to the mid-third millennium B.C. Four samples (Table 1) have been dated by radiocarbon dating. Only one date is close to the archaeological lime bracket suggested, two dates are much older than the expected time of the settlement, and one date is much younger than the age proposed. However, the archaeologi-

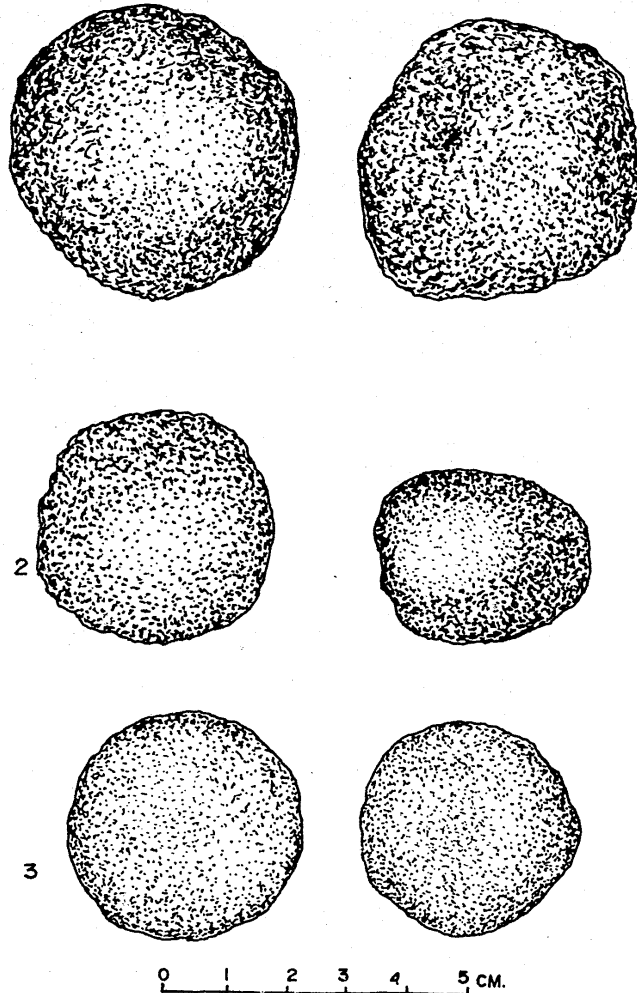


Fig. 7: Bokhira: sling balls

cal material is similar to many other Harappan sites on the Saurashtra coast and the settlement may be bracketed between the mid 3rd millennium B.C. and the end of the second millennium B.C.

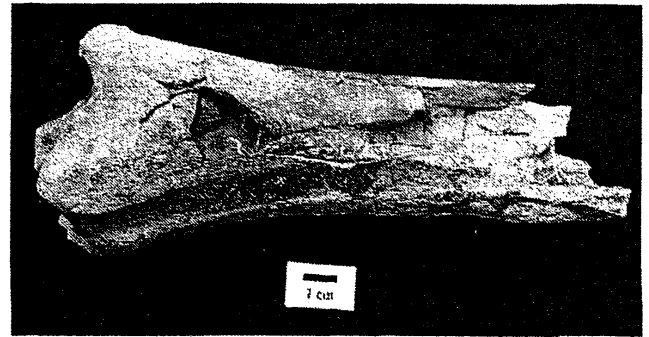


Fig. 8: A fragment of tibia of cattle

The Faunal Remains (Fig. 8-9)

The faunal material (TF=98, 2.416 kg) was analysed at the Deccan College Archaeozoology Laboratory using the standard protocol of laboratory analysis, data storage and quantitative analysis. It was possible to identify 72 (73.47%) fragments. A majority of the fragments were fresh and not subjected to post-depositional trampling and/or displacement. The skeletal assemblage from trench T-4 included a fragment of a human radius that is devoid of any marks. The general condition and the pattern of preservation indicates that it belonged perhaps to the same context as the animal skeletal elements. A few skeletal elements showed marks of charring, butchering activities and gnawing. There were two bone tools, one each from layers 2 and 3.

Although the faunal assemblage is small, it revealed the presence of both domestic and wild animals. Domestic animals include cattle (*Bos indicus*), buffalo (*Bubalus bubalis*) and goat (*Capra hircus*). Two wild animal species identified at Bokhira are the nilgai/blue bull (*Boselaphus tragocamelus*) and wild buffalo (*Bubalus arnee*). A major portion of identified bones belonged to cattle and buffalo. The proportion of wild mammals and non-mammals (such as crab and fish) relative to domestic ones is very small. It indicates that these wild and marginal resources, had a role to play in the subsistence economy of Bhokira. Although

Table 1: Bokhira: Radiocarbon dates

Sample No	Lab No.	Age of the sample	Calib Age	Reservoir Correction	Calibrated age
BKR-T1, Depth 15 cm	2423	8070±190	8130	7270	8360-7880
BKR-T3 Depth 30 cm	2429	2150±110	1290	1350	1490-1130
BKR-T1 depth 25-47 cm	2444	4790±100	4520	3990	4800-4300
BKRT-4, Depth 70	2453	9480±150	8680	9790	9930-9440

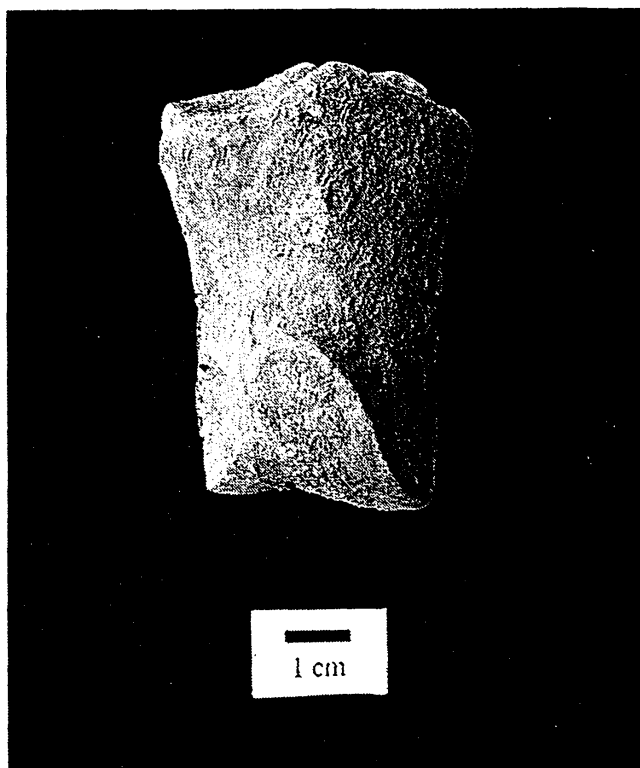


Fig. 9: Wild buffalo second phalanx

this archaeological material is small, it has highlighted the potential of the site for future understanding of the people and their economy.

Discussion and Conclusion

Excavations at Bhokhira brought to light the oldest site in Porbandar, dating back to the 3rd millennium B.C. It is the second site (after Bet Dwarka) discovered on the coastal plain, which has very little deposit of the Protohistoric period. The initial habitation took place on the bedrock and the Porbander creed would have been used for maritime activities since the earliest times. Houses had thatched roofs, which were erected on wooden poles as evident from postholes noticed on the surface. This is a characteristic feature of the Chalcolithic culture and rarely noticed in the Harappan civilization. Pottery and antiquities are very similar to those reported from Rojdi (Possehl and Raval 1989) and termed as "Sorath Harappan". However, this site has not revealed any significant structures such as those seen at Rojdi. After a few years of occupation, some rudimentary structures were made, as is evident from the discovery of an irregular small stone structure in Trench 1. Based on the deposit, it may be suggested that the habitation would have lasted less than, or around a couple of centuries. Their economy would have been based on marine resources such as shells and fish, as shell artefacts

were obtained in the excavation. This discovery also indicates that along with the Indus Civilization, regional cultures flourished in the coastal belt of Saurashtra and were engaged in maritime activities. The antiquities and radiocarbon dates suggest that habitation at Bhokhira may be bracketed between the mid third millennium B.C. to the beginning of the 2nd millennium B.C.

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