

From Dvārakā to Kurukshetra

Dr. S. R. Rao

Adviser

Marine Archaeology Centre, National Institute of Oceanography
Dona Paula, Goa 403 004

Introduction

Sri. Krishna, the towering personality of the Epic *Mahābhārata* and the greatest philosopher statesman—who has given the world the *Bhagavadgita* is said to have founded a new city called *Dvārakā* which is (spelt Dwarka) near a place of the same name on the west coast. After some years he went to *Kurukshetra* to assist the Pandava princes in a war fought for upholding *dharma*. In this article the archaeological evidence unearthed in the seabed for identifying the submerged city of *Dvārakā* and also the evidence from the excavations on land in the region of *Kurukshetra* are briefly reviewed.

The *Mahābhārata*, *Harivamśa*, the *Bhāgavata*, *Vāyu*, *Matsya* and *Vishnu Puranas* refer to the migration of the Yadavas from Mathura to *Dvārakā* under Krishna's leadership after he killed Kamsa. He is said to have left Mathura in the larger interest of the people of *Vraja* (the region of Mathura). He chose a remote place called Kusasthali on the coast of Anarta (Gujarat) which the Yadava ancestor Kakudmin Raivata had built. Finding the land available there insufficient for the Yadavas he enlarged it and named the new town *Dvārakā*. Since the fortified city of *Dvārakā* is described in ancient texts as *Vāridurga* and *Udadhimadhyasthām*, exploration of both the modern town of Dwarka on land and the island of Bet Dwarka which is also identified with *antardvipa* and *Kusasthali* that mentioned in the *Mahābhārata* had to be explored by Marine Archaeologists. During his stay for 36 years in *Dvārakā* Krishna infused self-confidence in the minds of the Yadavas and prepared the ground for

bringing solace to them. He planned his strategy for fighting the Kaurava army and served as the charioteer of Arjuna on the battlefield of *Kurukshetra*. Thus *Dvārakā* played an important role in upholding *dharma*.

The temple of *Dvārakādish* at modern Dwarka is of 13th-15th century A.D. (Fig. 1). Before launching a search for the anciently submerged city of *Dvārakā* in the Arabian Sea near the modern Dwarka, the Marine Archaeology Centre (MAC) had found that the places near Visavada and Madhopur (Rao S.R., 1987) considered by some scholars as original *Dvārakā* were not settlements of the 2nd or 3rd millennium B.C. In fact the author's exploration and that of the Deccan College Pune had revealed that the above sites were not earlier than the 1st-2nd century B.C. It is only at *Dvārakā* (20° 20' N 69° 05' E) in Okhamandal (Jamnagar District of Gujarat) that the onshore excavation in the *Dvārakādish* Temple Complex had brought to light three temples datable to 9th-1st century A.D. (Rao S.R., 1987) below which a highly eroded deposit of the 15th century B.C. was encountered. The Lustrous Redware Pottery and other human artefacts found in the trench were comparable with the antiquities found in the excavations at Prabhasa, a city of the *Mahābhārata* tradition in Junagadh District of Gujarat. It was also a port contemporary with *Dvārakā* (Rao S.R. 1990, 51-59). The first temple is datable to the beginning of the Christian era and the second to the 4th century A.D. All the three had separate paved pavements around them and were destroyed by storm waves or transgression of the sea at different

times. The beautiful figures of Vishnu, Varaha, Siva and others are in tact on the plinth and walls of the Vishnu temple but its roof is missing.

Marine Archaeological Excavations in Dwarka and Bet Dwarka Waters

The eroded settlement and the wave rolled pottery found in the lowest level of the trench in *Dvārakādhish* Temple forecourt provided evidence of the existence of *Dvārakā* said to have been destroyed by the sea. Fortunately the Indian Science Academy and the Department of Science and Technology gave financial support needed for starting underwater exploration while the National Institute of Oceanography (NIO) provided logistic support.

Marine Archaeology is an interdisciplinary study in which the Archaeologist, Historian, Geologist, Oceanographer, Geophysicist and Marine Engineer have a role to play. The technicians such as surveyor, underwater photographer and diver-archaeologist join hands with the crew of the research vessel in the exploration of the seabed for archaeological heritage such as the sunken ship and submerged port. The preservation of the underwater cultural heritage is the primary object of Marine Archaeology. It also generates scientific data useful for eustatic and environmental studies. Important ships such as the *Indus* which carried the famous Bharhut sculptures of 2nd century B.C. and sank in Sri Lankan waters must be retrieved. Similarly several ancient ports including Udyavara (near Udupi where a 9th century Krishna idol was installed by Madhavacharya), Poompuhar, Sopara and Kalingapattana which are of great importance for the reconstruction of the maritime history of India await the spade of the Marine Archaeologist. The thrill of discovering our heritage, supplying data regarding coastal erosion and interaction of cultures and educating the people about the adventures of the ancient navigators

besides preserving the undersea heritage have been important factors responsible for developing Marine Archaeology into a discipline where humanities and sciences have joined hands to search for the shipwrecks and sunken cities.

The skilled diver archaeologist has played an important role in surveying and excavating ancient *Dvārakā*. He is well trained in diving and underwater drawing and photography. Geophysical survey deploying the side scan sonar, echosounder and bottom-profiler has also been undertaken by the scientists of the National Institute of Oceanography. Position-fixing of the structural remains and other artefacts discovered in *Dvārakā* waters is done with Mini Ranger III. MAC has of late resorted to quick survey of a vast area of the submerged city by deploying underwater scooters. Similarly satellite information fed into the Global Position Fixing System (GPS) is made use of for determining the position of the survey vessel and thereby the position of buildings etc., in the seabed.

Bet Dwarka

The island of Bet Dwarka also known as Shankhodhara situated 30 km north of *Dvārakā* was explored, as Krishna is said to have brought the Yadavas first to Kusasthali in Bet Dwarka and rebuilt the town *Dvārakā*. Onshore survey of the east coast of the island revealed a rubble wall (Fig. 4) extending over 500 m but damaged at several places. The pottery from the section of the wall was subject to Thermoluminescence dating method, and the date so obtained is 3,528 years before present, confirming thereby that the wall belonged to the 16th century B.C. There are seaward walls not only in the southern sector (BDK I-II) but also in the central sector near the site designated as BDK VIII. This wall is 548m in peripheral length and is exposed in lowest low tide (Fig. 5). Another area where a submerged wall of massive stone blocks becomes visible is the Balapur

Bay in the north. All these walls have been explored and documented in the course of underwater excavation in the Gulf of Kutch. From Siddi Bawa Pir in the south upto Balapur in the north there are remains of walls of rubble in the cliff section of the island. They are overgrown with jungle. The submergence of the town which extended over 4 km along the eastern shore is beyond doubt. The excavation of trenches in the seabed at BDK I - II and in the Intertidal zones of Balapur (BDK VI) and BDK VIII have yielded very significant pottery and other antiquities. The vast mudflats of Balapur Bay which get exposed in low tide over an area of nearly 1 km seaward indicate the original habitational area of ancient *Dvārakā* which has been buried under clayey sand and shingle. A trench dug in the intertidal zone has brought to light a shell worker's house and potsherds too. What is highly significant at Balapur is that the trenches dug in the lower terrace yielded Late Harappan and Lustrous Red Ware. In the central sector there is also a rock-cut slipway for launching boats. Six rock-cut wells in the vicinity of Nilakntha Mahadeo temple suggest extension of *Dvārakā* to central sector.

The Periodisation of ancient *Dvārakā* (Shankhodhara) based on seven expeditions (Rao S.R. 1990 and 1991) needs to be revised on the basis of 3 more expeditions. The excavated buildings and antiquities such as the seal, inscribed jar, stone mould of a smith, glazed olpin (cosmetic bottle), Late Harappan Ware, Lustrous Red Ware and Black and Red Ware of the Protohistoric Period which is succeeded by the Early Historic and Medieval Periods in Bet *Dvārakā* and the urban features of the port city of *Dvārakā* are taken into account.

Evidence for Pre-Period I (Pre-*Dvārakā*, Kuasthali town)

Late Harappan Sturdy Red Ware types eg. perforated jar, dish-on-stand and incurved bowl and also Black Ware dish in

BDK I, II, VI etc.

Evidence for Period I (Dvaraka)

1. Late Harappan type seal engraved with the motif of a threeheaded animal - bull, unicorn and goat reminiscent of Harappan motifs but influenced by Bahrain art style.
2. Sturdy Red Ware trough or basin with an inscription in a script clearly indicating the Transition Phase from the Late Harappan cursive script to Early Brahmi script written from left to right. The inscription reads *ma-ha-ha-gach-sha-ha pa = Maha (mahha)-gaccha (kaccha) shah-pa*. It conveys the sense "Sea Lord Protect". *Shah* is an old Persian word, the rest being Sanskrit. This highly waverolled potsherd comes from the Intertidal zone (For details see Rao, S.R., 1987-1991).
3. The stone mould from BDK I - II intertidal zone must have been used by the bronze smith to cast spearheads of three different sizes. Similar moulds are found in Lothal.
4. Iron stakes and nails.
5. Glazed olpin similar to a glazed ware from Late Harappan and Chalcolithic sites.

Each one of these objects has great significance for dating the site and identifying Bet Dwarka (Shankhodhara) referred to as Kusasthali (where *Dvārakā* was built) in the *Mahābhārata* according to Hiranand Sastry and Umashankar Joshi.

The seal (*mudra*) found in underwater excavation corroborates the use of seals by citizens when Dvaraka was attacked by Salva, king of Saubha (Ref: *Harivamśa, Bhavishya Parva*). It was used as a sort of identity card for citizens and to prevent the enemy from entering the city. The text says that it was the duty of the guards to check the identity. The seal also suggests trade and cultural contacts with Bahrain where Indus weights and Bahrain seals with Indus

motif and script as well as Lustrous Red Ware are found. The protohistoric sites in Bahrain were swallowed by the sea during the same period as Dvaraka was submerged (Larsen in *Bahrain Through the Ages*).

The inscription on the votive vessel confirms that the citizens of *Dvārakā* were literate and spoke Sanskrit. The occurrence of the Old Persian word "shah" may indicate the presence of foreigners at this important town. It further suggests that the Sea God Varuna was worshipped as there is a reference to him in the Epic etc. The various types and sizes of stone anchors with three holes found in large numbers in *Dvārakā* waters and the mooring station, at *Dvārakā*, discovered in the Arabian Sea prove beyond doubt the extensive overseas trade of the port of *Dvārakā*. The triangular 3-holed stone anchors of *Dvārakā* are similar to those of the 14th-12th century BC. anchors of Cyprus and Syria (Rao S.R. 1990, 59-98 and Frost H. 1985). Such anchors must have had a much earlier origin in the Indian ports of Late Harappan days as attested by a Harappan seal depicting a triangular anchor (Konishi, M.A. 1985, 148). The triangular Lothal anchor had a single hole. By 1800 or 1700 B.C. three-holed anchors must have been invented in India. What is rather baffling is that while triangular anchors are found in Dwarka waters we are yet to find them in Bet Dwarka waters. They may be lying buried deep in the mud flats which are yet to be excavated.

The Lustrous Red Ware (LRW) of mid-second millennium B.C. found in Bet Dwarka waters, though bereft of lustre due to saline action, can be easily identified from types namely jar, bowl, stand and dishes comparable to those of Rangpur IIC and III periods (Gaur A.S. 1992; Rao S.R. 1987, 60 and Figs. 90 and 90A). If the calibrated dates of Prabhas LRW which are now widely accepted (Rao S.R. 1991, 29-30) are taken into account, Period I of *Dvārakā* the first in Bet Dwarka island should be assigned to 1700 B.C., since some of the ceramic wares

of the Devolutionary phase of Harappa Culture have been found in BDK I. The Pre-Period I with perforated jar and incurved bowls would be slightly earlier in date. The inscribed jar of BDK I-II belongs to Period I and so also the Late Indus type seal.

It would not be far off the mark if the Late Harappan settlement of Pre-Period I of Kusasthali is dated 1800 B.C. and *Dvārakā* could have been found around 1700-1600 B.C. if not slightly earlier. The date 1528 B.C. arrived at for the pottery of the cliff section and the Lustrous Red Ware by TL dating method may represent the *Dvārakā* city built on the terrace while the town in lower below was earlier.

Identification of *Dvārakā*

Underwater exploration of *Dvārakā* conducted by MAC from 1983 to 1994 has brought to light the existence of a well-fortified port city at the mouth of the river Gomati. This city was built in six blocks two on the right bank and four on the left bank. All the six sectors have protective walls built of large well dressed blocks of sandstone, some as large as 1.5 to 2 m long, 0.5 to 0.75 m wide and 0.3 to 0.5 m thick (Fig. 9). L-shaped joints in the masonry suggest that a proper grip was provided so as to withstand the battering of waves and currents. At close intervals semi-circular or circular bastions were built along the fort walls in order to divert the current and to have a proper overview of the incoming and outgoing ships. Drawing an analogy from the depiction of Kusunagara on the Sanchi Gateway, it can be said that it was built perhaps on the plan of *Dvārakā* city. There are entrance gateways in all the sectors of *Dvārakā* as surmised on the basis of the sill of the openings. The fortwalls and bastions built from large blocks (Fig. 1-2) which are too heavy to be moved by waves and currents are *in situ* upto one or two metres height above the boulder foundation in the sea. In a few places as many as five courses of masonry are visible but in others the wall and bastion have collapsed. The city must

have extended upto the rocky ridge which is 1.2 km seaward of the temple of Sea God (Samudranarayana) on the present shore at *Dvārakā*. The structural remains have been traced over an area of 1 x 0.5 km. There may be some structures on the southern channel recently traced in the course of Geophysical Survey in 1991-92. Whatever has been traced so far conforms to the description of *Dvārakā* in the *Mahābhārata* to a large extent. The enclosures may correspond to *antahpurās* of the texts. The large number of stone anchors are indicative of brisk overseas trade. Large ships were anchored in the sea and small ones nearer the warehouses on the Gomati, part of which is now submerged.

The date of the submerged site near mainland *Dvārakā* is determined on the basis of the Lustrous Red Ware and Grey Ware found in a small quantity. It is risky to depend on 14C dating of charcoal collected from loose sediments because modern stuff might have sunk below due to swells and churning action of the sea. Provisionally, the date 1600 B.C. based on the relative date of triangular stone anchors with three holes comparable to those in use in Cyprus and Syria in 1400 B.C. seems reasonable, especially because triangular anchors were used in Lothal.

Marine Archaeology has proved that the existence of *Dvārakā* and its submergence by the sea in the 2nd millennium B.C. referred to in the *Mahābhārata*, *Harivamśa* and the *Matsya* and *Vayu Puranas* is a fact and not a fiction. Reclamation of land when the sea level was 7 to 8 m lower about 3600 or 3700 years before is attested to by the boulder foundation on which the walls and bastions were built. The reclamation of land for building in waterlogged areas is referred to in the *Mahābhārata*.

Another crucial evidence is provided by the seal (*mudra*) in use, to which there is a reference in the *Harivamśa*. Similarly the iron stake said to have been fixed in the

moat to prevent the entry of the enemy into the city is also found in Bet Dwarka excavation. The second urbanization after the first urbanization by the Harappans took place at *Dvārakā* as well as *Dvārakā-Kusāsthali* in Bet both of which were connected anciently by the landstrip near Okha. To meet the growing need for more space a new town was founded at the mouth of Gomati river. It must have been the principal port while Bet *Dvārakā* became the administrative capital which was protected by the sea and hill. Other smaller ports were Nageswar and Pindara.

With the scientific investigation of submerged *Dvārakā* the man-god personality of Krishna is not a myth.

Kurukshetra

In November-December 1993 the author had an opportunity to visit Chandigarh, *Kurukshetra* and Thaneswar and study the sites as well as the antiquities found in the excavation of a large number of Protohistoric sites in Haryana in the ancient Sarasvati valley. Particular mention must be made of the evidence from Bhagawanpura where the Late Harappan and Painted Grey Ware are found overlapping. The Late Harappan and Ochre-coloured Pottery are similar in most respects. They represent cultural traits of Late Vedic and *Mahābhārata* periods. In the excavations at Banawali the pre-Harappa Culture anticipates in respect of pottery, religious motifs and even architecture of mature Harappa culture. Homogeneity of products, urban discipline, writing and the religious context of seal motifs are significant in classical Harappa Culture. For the first time a fire-altar (so-called brazier) occurs in front of a horned tiger suggesting the acceptance of the deity of Forest-dwellers (or physical prowess) as a part of the Cult of Fire Worship. The horned deity referred to as Arka (*Agnī*) in the *Asvattha* bower or tree is explicit in Harappa and Mohenjo-daro seals but it is symbolically shown on the Banawali seal by a horned

figure in an Asvattha tree. The evidence from Balu especially from the Harappan levels is remarkable for giving a clue to the origin of the Harappa culture. Here the small cubical stone weight, triangular and other types of cakes anticipate the mature Harappa Culture. In Kunal there are cursive signs in graffiti on the pottery. The Red Ware and Black-and-Red ware are as prominent as faience beads, copper arrowheads and celts, bone arrowheads and awls in the pre-Harappan period when significant structures were also built. These features corroborate the Kalibangan, Banawali and Early Bara evidence. Like Dholavira, Lothal and Rangpur in Gujarat, the Haryana sites of Balu, Kunal and Banawali as also Bhagwanpura when taken together present an excellent picture of the beginning, maturity, decline and devolution of the Harappa Culture in Gujarat and Sarasvati Valley during 3000 B.C. (calibrated date) to 1500 B.C. period. In fact branch of the *Saraswati* entered the Gulf of Kutch through Metisana district in north Gujarat. The *Rigvedic* cultural traits such as fire-worship, animal sacrifice, disposal of the dead by cremation (see post-cremation burials of Dholavira) and burial, presence of horse and use of rice, intensive maritime activity (to which reference is made in the *Rigveda*) are conspicuous in Harappa culture also. Both share the credit for contribution to science, mathematics, engineering, astronomy and above all the introduction of Yoga as a means of disciplining the psycho-physical system in man. During the Mahābhārata period the spiritual value of Vedic Culture was upheld by Sri. Krishna. He made a great sacrifice by leaving his birth place Mathura and found a new home to formulate his plans for eradicating evil forces and reestablishing *Dharma*. It is no wonder that he chose *Kurukshetra*, the homeland of the Kurus and the land of *dharma* for reestablishing it even if it meant killing learned men who support a wrong cause. The discovery of *Dvārakā* in Bet Dwarka and a mainland and the

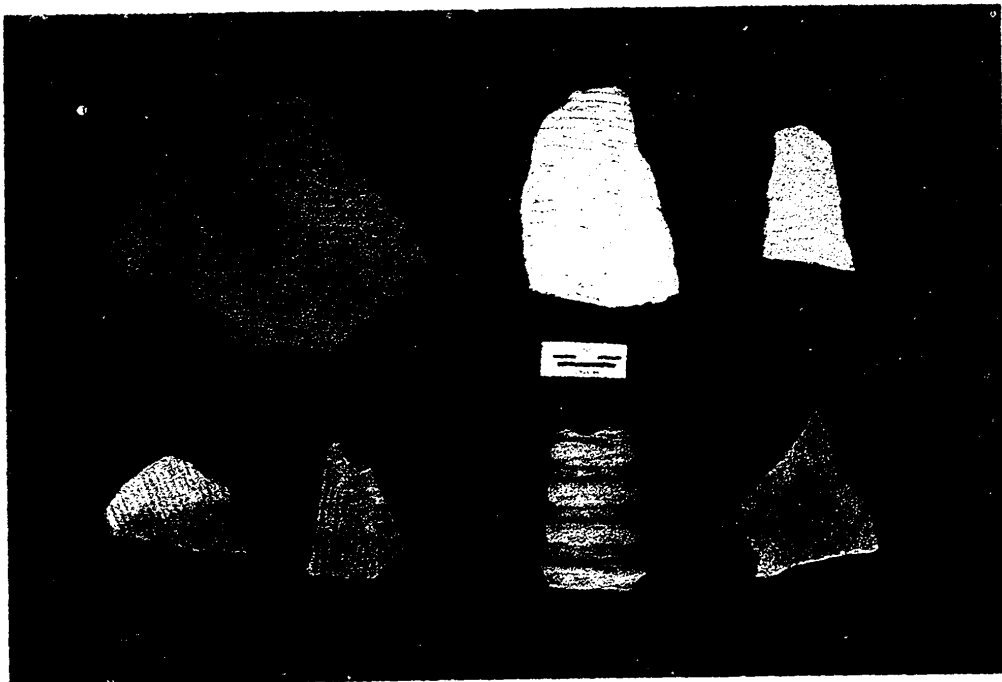
archaeological evidence found compatible with the *Mahābhārata* tradition remove the lingering doubt about the historicity of *Mahābhārata*. The finds vindicate the statements made in the Epic about urban life, literacy, maritime activity and development of science and engineering. These things could not be proved earlier at Hastinapura and Mathura because of extremely limited dig in the lower levels. If large scale digging in lowest levels of selected mounds is done more convincing proof of Krishna's activities in the Ganga-Yamuna valley can be produced. *Dvārakā* excavations have demonstrated that the rich underwater cultural heritage of India can be successfully explored, excavated, retrieved and preserved even if a small fraction of the budget spent on land-archeology is made available for underwaterarchaeology at *Dvārakā* Prabhasa and Somnath Riverine archaeology in Sarasvati and Yamuna can be successfully undertaken to throw more light on Mathura, and other centres buried under the ever changing courses of the rivers which are now traced by satellite remote sensing. A political will to reconstruct the cultural history of the *Vedic* and *epic* periods of northern India on the same lines as the Government of Tamilnadu has done for retrieving the cultural heritage at Poompuhar is all that is necessary. The Marine Archaeology centre is now fully geared to take up the exploration of underwater cultural Heritage of India. A Project for the second phase excavation at *Dvārakā* and Somnatha submitted to the Council of Scientific and Industrial Research, Delhi awaits implementation since 3 years.

Reference

1. Rao, S.R., 1987: *Progress and Prospects of Marine Archaeology in India*, NIO, Goa.
2. Rao, S.R., ed 1990: *Recent Advances in Marine Archaeology*, Society for Marine Archaeology, NIO, Goa.
3. Rao, S.R., 1991: *Dawn and Devolution of Indus Civilization*, Aditya Prakashan, New Delhi.



Chinese celadon wares



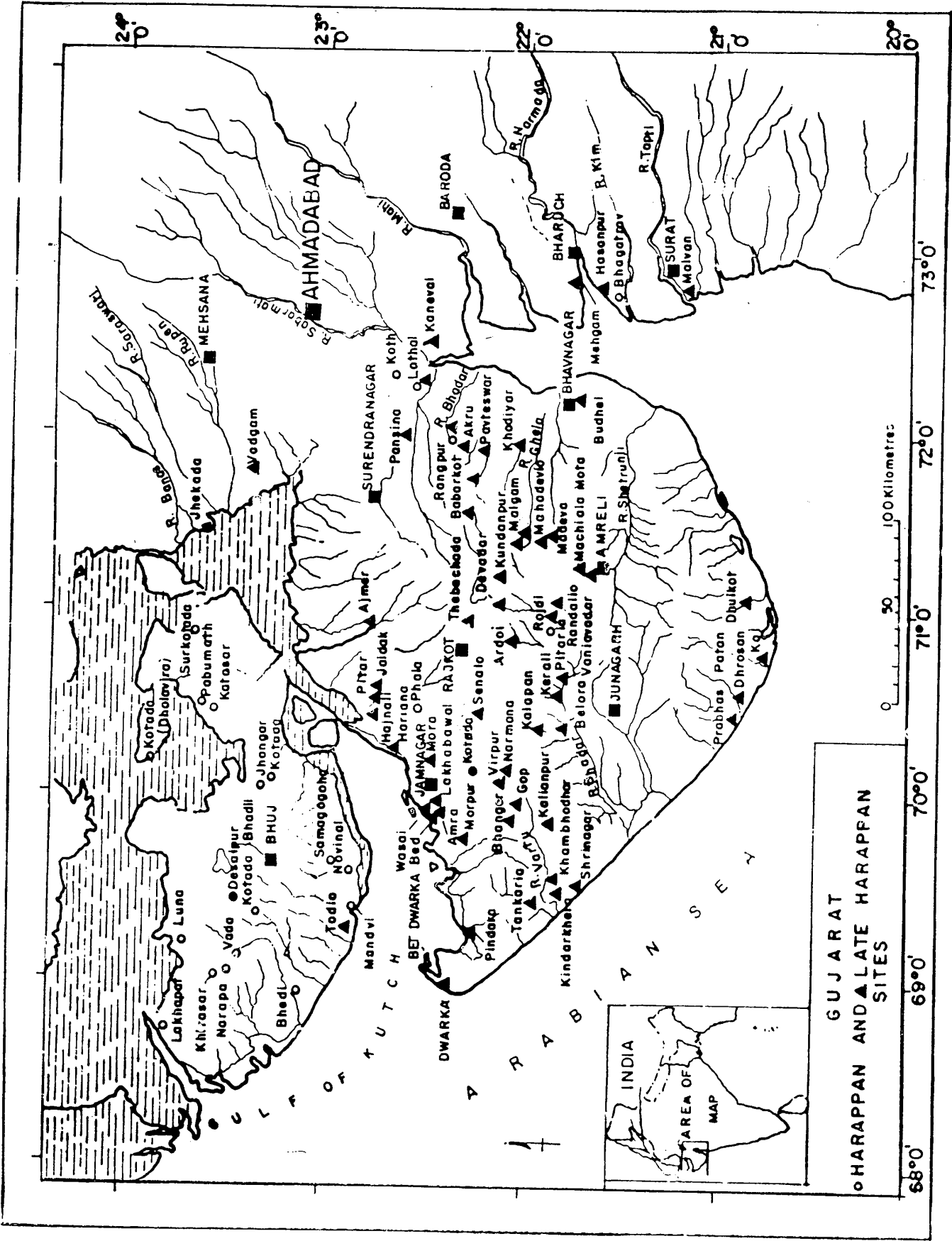
Incised potsherds

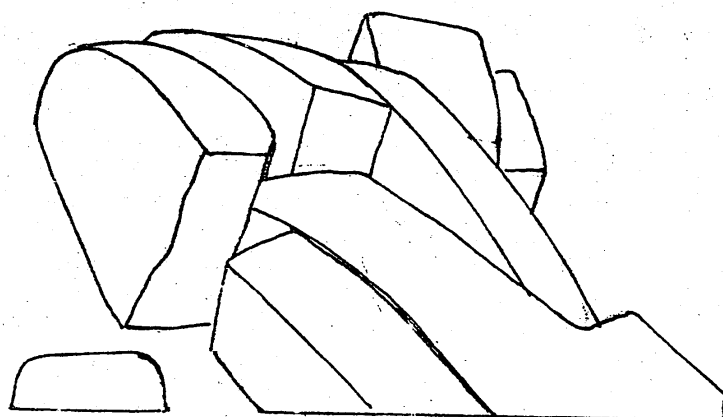


A well in the upper terrace of BDK VI near Nilakantha Mahadev Temple. Site of early Dwaraka.

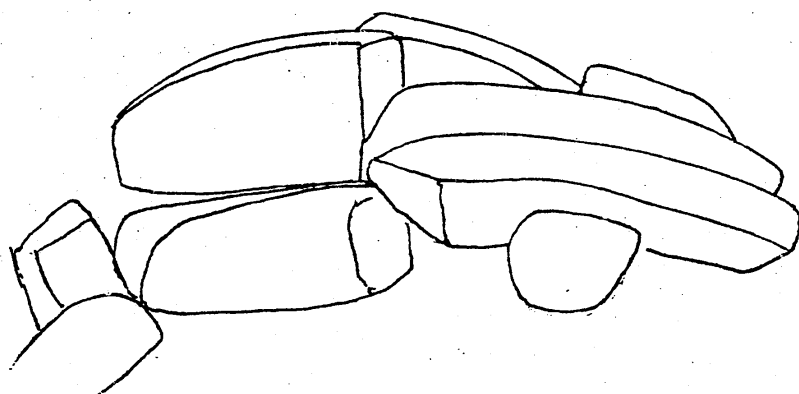


Coin of Kanishka- Bet Dwaraka Period II





0 50 cm.



0 50 cm