

Search for Dwarka

SILA TRIPATI and A.S. GAUR
 Marine Archaeology Centre
 National Institute of Oceanography
 Dona Paula, GOA

Dwarka, 22°22'N and 69°05'E, is in the extreme west of the Saurashtra Peninsula, on the Arabian Sea. The name Dwarka is derived from Dwar, a door, and it is believed that in ancient times it was a flourishing port city, considered to be the gateway to the mainland. Different scholars have propounded different theories about its location. Out of various sites suggested by them, the present site is the one which is considered to have been submerged by the sea.

Excavations at Dwarka: The excavations at Dwarka carried out by the Deccan College, Poona, in 1963, was limited to an area of 8 × 6 m, later reduced to 2 × 2 m; below 6 m depth, medieval and early historic occupation layers were dug through and the earliest layer was dated to 1st cent. AD. Sankalia came to the conclusion that the earliest settlement of Dwarka is not earlier than 1st cent. BC/AD (Ansari and Mate, 1966). But there is an overwhelming archaeological evidence to show that Late Harappan settlements of the second millennium BC, existed within a radius of 20 km from Dwarka, especially at Nageshwar. Late B. Subba Rao and P.P. Pandya had excavated in the fifties, Amra, Lakhabalwal and Vasai in Jamnagar district and produced evidence of Late Harappan and Post-Harappan occupation. Excavation by Pandya at Prabhasa (Somnath), another important site of Mahabharata fame in Saurashtra had also yielded evidence of settlements in the 17th–13th cent. BC (fig. 1). If the strategic position of Dwarka and Bet Dwarka and their commercial importance as shell-working and boat-building centres and as entry points for ships from the Arabian and Mesopotamian ports, are considered, it becomes obvious that both Dwarka and Bet Dwarka were important trading stations in the Late Harappan and Post-Harappan times (Rao, 1984: 16–26).

Excavation between 1979–80: Between 1979–80 a systematic excavation of the ancient site in the forecourt of the temple of Dwarkadhish (Pl. I) was undertaken by S.R. Rao, on behalf of Archaeological Survey of India, after demolishing a modern building which covered the view of the magnificent temple from the township side. This temple, built in two stages, stands overlooking the Sangam, where the Gomati river joins the Arabian Sea. To everyone's surprise, the results were extremely encouraging although the space available for excavation was very limited. An exquisitely carved temple was found lying under a modern building which has been partly pulled down. This temple noticed at a depth of 1.5 m from the sill of the mokshadvara (northern gateway), consists of a sanctum, a vestibule, a closed assembly hall and an entrance porch.

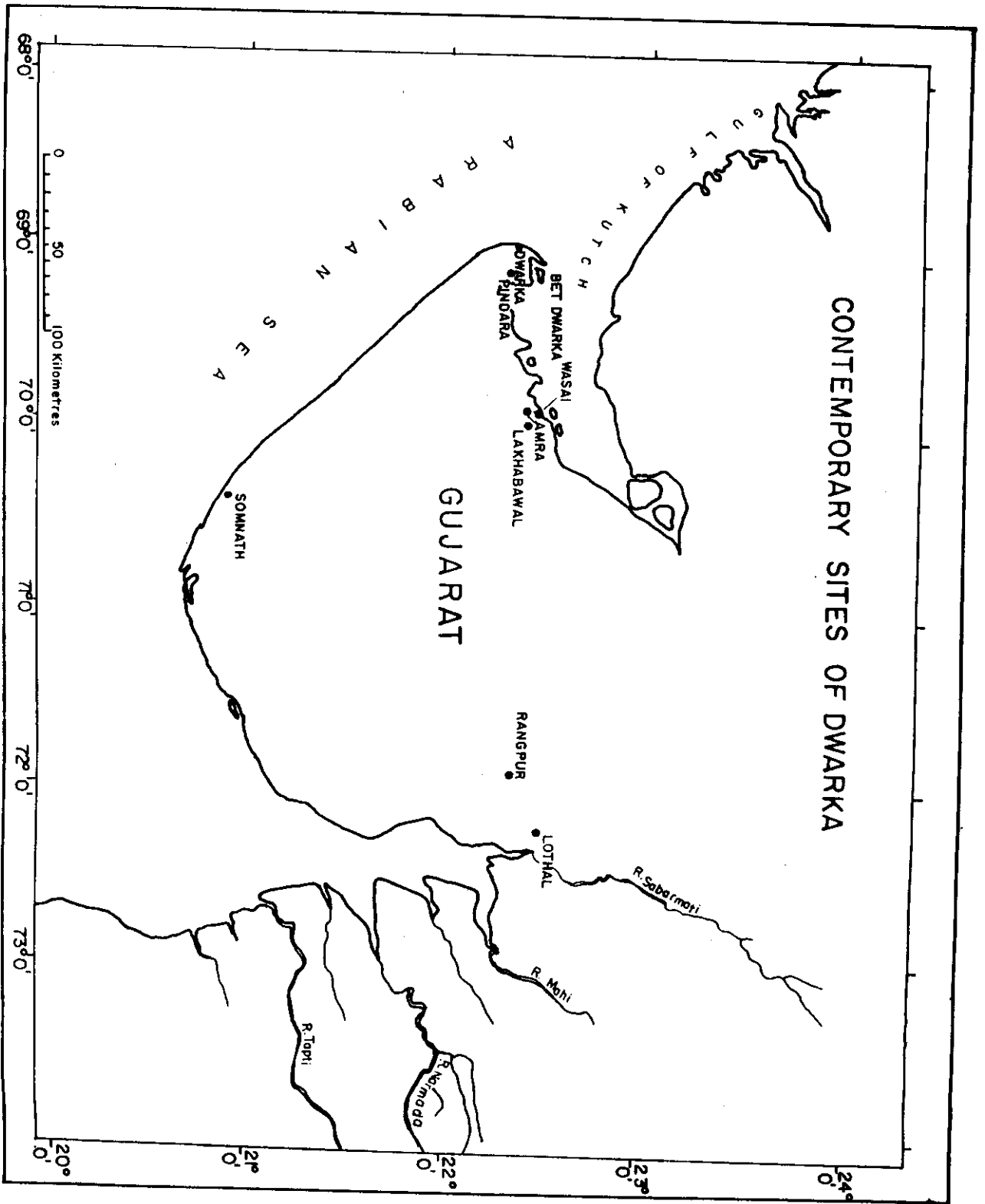


Fig. 1 Contemporary sites of Dwarka.

Though small in size (12 × 8 m), the temple is noted for its sculptural art, which is much superior to that of the Dwarkadhish temple itself (Pl. II). The carvings on the plinth, wall, etc. are intact and the destruction of the superstructure is not due to vandalism. The influence of Chalukya-Rashtrakuta style can be seen in the vigorous rendering of animals, gods, demigods and friezes of Kirtimukhas (Rao, 1980: 15-19). Further careful excavation by laying 4 trenches brought to light the remains of two more temples, the lower one being datable to the 1st cent. BC and the upper one 2nd-4th cent. AD on the basis of amphora and coins, such as the Karshapanas (Pl. III). Deeper digging up to 10 m depth exposed the debris of a protohistoric settlement, in which a distinct pottery known as the Lustrous Red Ware was also found in layer 11 and 12 (Pl. V). This ware seems to have been brought and deposited here by a tidal wave which destroyed the ancient town of Dwarka in the 1st or 2nd cent. BC. A settlement of the 12th-14th cent. BC must have existed before the early historical town came to be built here. The Lustrous Red Ware which is found in many other sites in Jamnagar district, such as Vasai, Amra and Lakhbawal has been assigned to the 15th cent. BC. This unambiguous archaeological evidence on shore increased the possibility of finding the remains of a contemporary but submerged Dwarka. .

Bearing in mind that the sea had destroyed a 15th cent. BC settlement on shore, it was felt necessary to undertake offshore exploration of Dwarka to ascertain if any structural remains and antiquities, such as pots and pans of the ancient city could be traced in the seabed. It was decided to explore seaward of the entry point of the ancient harbour, where a the temple of the sea god, known as Samudranarayana or Varuna Devata is situated.

Protohistoric Settlement at Bet Dwarka: Bet Dwarka is known as Shankhodhara where, Sri Krishna's consorts are believed to have lived; it is as holy a place of pilgrimage as Dwarka itself. Since the reference in ancient texts to Dwarka as standing in the sea (*Udadhimadhyastham*) "a fortress in water" (*Vāridurga*) suggested that the island of Bet Dwarka might have also been a part of Krishna's Dwarka, it was explored by the Marine Archaeology Centre, under the leadership of S.R. Rao. The crenulated bay on the eastern shore of the island served as a good sheltered harbour and the forest provided timber for boat-building. Even now boats are drawn ashore in the monsoon and boat repairing is undertaken. Shell-working has been another major industry since the days of the Indus Valley civilization all along the shore of the Gulf of Kutch and the best quality of conch shell (Shankha from which the island derives the name Shankhodhara) is found in the Gulf around Bet Dwarka.

A careful exploration of the shoreline and cliffs of Bet Dwarka in 1982, brought to light ancient settlements of two different periods. The first settlement is termed as Late Harappan, when a highly civilized people came to occupy the island after destruction of Harappa and Mohenjo-daro. After a couple of centuries this settlement was destroyed by the sea. Then the inhabitants must have moved to the mainland Dwarka despite the fact that it was also subjected to frequent hurricanes and consequent destruction of the town. The archaeological evidence

gathered so far from surface finds in Bet Dwarka shows that the island was abandoned at the beginning of the 14th cent. BC and was not reoccupied for 1200 years. It is only around the 2nd cent. BC that it became once again an important port and large settlements were made continuously thereafter.

Exploration of the island yielded specimens of Late Harappan pottery, namely the incurved bowl, beaker and dish-on-stand besides a stone mould of a coppersmith from the cliff section and intertidal zone near the Dargah of Siddi Bawa. During the course of excavation in the cliff section, a rubble wall, built in the box technique for increasing its thickness was exposed and the pottery found in the stratified deposit was identified as Lustrous Red Ware, datable to 15th cent. BC. The fortification wall of the city (Pl. IV), extending over a length of 500 m in the southern sector (BDK I–II), has been heavily damaged, partly by the sea and partly by the latter settlers (fig. 2). To ascertain the seaward extension of the 3500 years old settlement here, the first offshore exploration was undertaken in April, 1983, which was followed by 2nd and 3rd explorations in 1984 and 1985. A wall of large prismatic shaped stone blocks, built on the wavecut bench, 180 m seaward off the shore, was discovered in 1983. It is exposed in low water, but remains submerged rest of the time. Further seaward, six trenches were dug in the seabed in 1984 and habitation debris was encountered up to 400 m distance, in the clayey deposit lying under the overburden which is 1 to 2 m thick. One of the trenches (UW 6) yielded in layer 2 a Late Indus type seal of conch shell, engraved with a three-headed animal motif (Pl. V.10.X), while from layer 2 of trenches UW 4 and UW 5 chert blades were recovered. These artefacts from seabed and the pottery from the intertidal zone and cliff section, which included Lustrous Red Ware and Black-and-Red Ware confirmed the submergence of a protohistoric settlement of mid-second millennium BC. A votive jar inscribed in the script of transition phase of Harappan culture was also found (Pl. VI.10.XI). The northern part of the eastern shore of the island up to and including the Balapur Bay and the intertidal zone were explored in the third (1985) and sixth (1987–88) expeditions and a massive fortification wall, 558 m in perimeter was discovered in the site, now designated as BDK VIII (Pl. VII.10.V). Nine courses of stone masonry of the wall are intact, the rest having been destroyed by wave action and currents. Between this wall and the rubble wall of BDK I–II there is a rock-cut slipway for launching boats. Weathering and disintegration of the rock has considerably damaged the side walls and the sloping floor is fairly visible. At the northern end of the eastern shore habitation deposit of the Late Harappan and Post-Harappan (LRW phase) is seen lying under the early historic and medieval occupation deposits in BDK VI. For about 1.5 km seaward, off the promontory on which the Custom House stands, the intertidal zone is covered by clayey sediment. A small trench dug 50 m seaward yielded bone beads, sturdy Red Ware and Black-and-Red Ware of LHP and also coarse ware of medieval period. The entire stretch of 4 km from Siddi Bawa (BDK I) to Balapur (BDK IV) was inhabited and protected by fortification wall during the protohistoric period. Traces of the fortified island

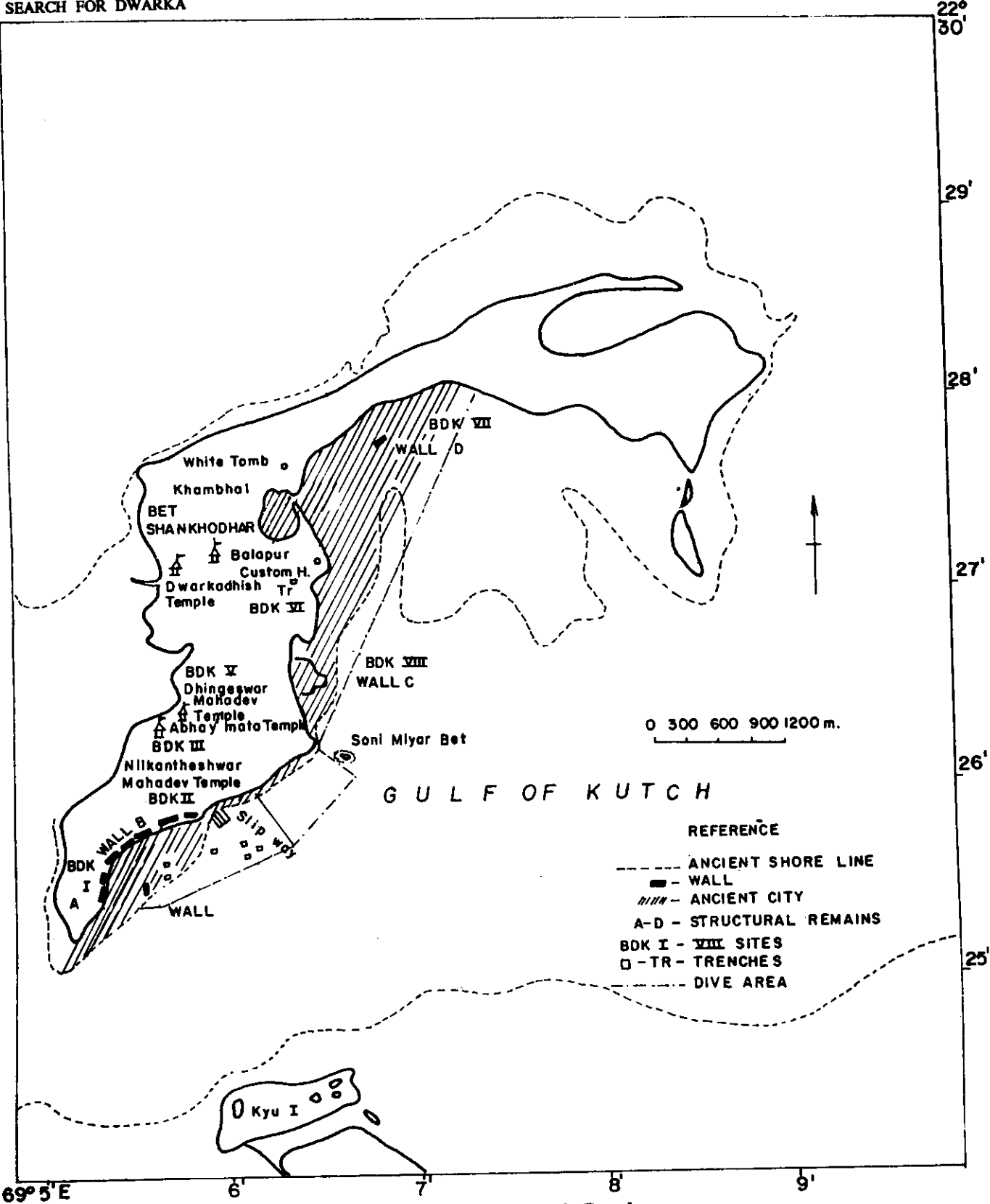


Fig. 2 Excavation trenches in Dwarka.

port city can be seen on shore and in the intertidal zone. The seal, blades and BRW indicate that the city was at least 0.5 km wide at the southern end. At the northern end it was still wider. All the residential buildings, built of smaller blocks of stone and enclosed by the landward and seaward walls are submerged and levelled up. They are lying wavesorted along with large quantities of rejected columella of conch shells from which beautiful bangles, beads, vessels and seals were produced for domestic use and export (Pl. VIII). The TL date of pottery from the cliff wall, in BDK I is 3520 years BP. The archaeological evidence and TL date corroborate tradition that Bet Dwarka was a large port and a Nagari (city) in the real sense of the term. It proves beyond doubt that urbanization had taken place and the inhabitants carried on overseas trade with Bahrain and other ports of the Arabian Sea, in the 16th–15th cent. BC. There was also an earlier settlement before, as indicated by the Late Harappan pottery and chert blades (Pl. IX). Perhaps that was Kusasthali, on the ruins of which Dvaraka of Mahabharata age was built, as repeatedly mentioned in ancient texts (Rao, 1988: 231–53).

Dwarka

The onshore excavation in the forecourt of Dwarkadhish temple in 1979–80 had yielded reliable evidence of submergence of the first protohistoric town in the 14th cent. BC. Furthermore, it was observed that temples I and II of the 1st cent. BC–2nd cent. AD and temple III of 9th cent. AD were destroyed and submerged for sometime, but perhaps due to regression the ruins were exposed. Such destruction and submergence may be due to sea-level fluctuations or due to subsidence, or both (Rao and Nayak, 1984–85).

The third Marine Archaeological Expedition commenced systematic search for submerged structures 200 m seaward, off Samudranarayana temple, in December, 1985. The subsequent expeditions in April, 1986, November, 1987 and February, 1988 covered an extensive area of more than 1200 × 500 m in seabed search, and discovered many significant buildings of the protohistoric period and a few of the early historical period also. At a number of locations, submerged structures (see fig. VII.10.4) *in situ*, namely fort walls, bastions (Pl. X), jetties, perforated stone anchors, timber of the wrecked ship and artefacts, such as copper bell and brass nails and frames of a chariot (Pl. XI), a fragmentary statue of marble (Pl. XII), the moonstone and beam of a temple and iron anchor (Pl. XIII) were laid bare along the right bank of the submerged channel of the river Gomati in water depth of 5 to 10 m.

The outer and inner gateways of the fortification, flanked by circular or semicircular bastions have been traced. A flight of steps from the inner gateway led to the Gomati river. The smaller three-holed triangular anchors of stone found near the bank weigh about 50 to 163 kg. Perhaps small boats using these anchors sailed up the Gomati river, while larger ones, prismatic in shape and weighing 158 to 272 kg (Pl. XIV), lying near the outer fortification and jetty must have been used by the sea-going vessels of larger dimensions. In this connection it may be noted

that three-holed and one-holed stone anchors were used at Kition in Cyprus and in Syria, in the 12th–14th cent. BC. Dwarka anchors are more or less of the same age as judged from the ceramic wares associated with three-holed triangular anchors. A single-holed anchor, of the type found in the 14th cent. BC ship, Ulu Burun, off Kas, on the Turkish coast was recovered in Dwarka excavation. From the size and number of anchors it can be said that Dwarka was the largest port of the protohistoric period, so far known on Indian coast and deserved the name Dvara (gateway) given to it in ancient texts and by the founder of the city (Rao, 1988: 231–53).

After having discovered the gateway and inner and outer walls of protection on the right bank of Gomati, it was necessary to search for corresponding structures on the bank opposite. In the year 1988–89, a rectangular structure was discovered on the left bank at buoys 68, 69 and 70, opposite the bastion at buoy 35. The width of the river increased from 100 m near SN to 700 m, over a distance of 1.5 km. On the left bank also walls and bastions are found to have been built on dry boulder foundation, on the bedrock. Four courses of bastions and walls, built of large dressed sandstone blocks some measuring $2.6 \times 1.3 \times 0.4$ m have been exposed by air-lifting (Rao, 1990: 59–98).

The offshore exploration of the submerged city of Dwarka was resumed in November, 1990 to determine the westward extent of the submerged city and locate the ancient shoreline, where the port installations ended. A secondary object was to trace the fortification, if any, on the southern side of the middle channel. Earlier excavation in the sea had recovered an inner and an outer fortification on the right bank and one more on the left bank. This year, another fortification, with a number of circular bastions was traced. Thus four enclosures of the legendary city have been traced so far in 7 to 10 m water depth and city extended upto 1.5 km, where a 2 m high ridge found in 11 to 14 m depth is identified as marking the limit of the city. The huge three-holed stone anchor found here suggests that large sea-going vessels were anchored near the scarp, while smaller vessels sailed up the middle channel of the river Gomati. On either bank remains of smaller stone anchors are found.

The plan of Dvaraka city approximates to the description given in the *Mahābhārata*. That the port was built by reclaiming land from the sea, as described in the text is also corroborated by the boulder foundation provided for pillars, bastions and walls in low-lying areas.

Antiquities

The antiquities found in excavation are useful in ascertaining the cultural level of the people. A Late Indus type seal of conch shell with a three-headed animal motif representing a short-horned bull, a unicorn and a goat, is engraved on it.

The seal and motif suggest Indus origin but the art style bespeaks of Bahrain art (Rao, 1986). Three-headed animal figures are engraved on Indus seal of Mohenjo-daro but the Late Harappan pottery from the intertidal zone of the island suggests a mid-second millennium BC

date. This evidence is corroborated by an inscription in Post-Indus characters on a votive jar from Bet Dwarka. The votive jar occurring in the intertidal zone is inscribed in the Late Harappan script which is in the transitional phase (Rao, 1987). On the basis of the phonetic value of analogous Indus signs, the Bet Dwarka inscription reads Mahahagacha-shah-pa = mahakacha-shah-pa, which conveys the meaning 'Sea Lord Protect'. It also provides the missing link between the Late Harappan script of 1800 BC and the Brahmi script of 3rd cent. BC. In this connection it is essential to note that Prof. David Diringer, W.W. de Grummond, Prof. R.N. Dandekar and Prof. S.H Ritti have accepted Rao's conclusions, detailed in *The Decipherment of the Indus Script* (Asia, 1982) and further elaborated in *Bharati* (Journal of the Banaras Hindu University, 1986) as satisfactory and a reference to it is made in *Indian History and Culture* (1988-89), a textbook prescribed for culture and history students. In reviewing the book Prof. Maurer pleads that Rao's work should be read with the same objectivity which Rao has imposed on himself (Maurer 1985, 378). The Bet Dwarka inscription has been discussed by epigraphists at length, in the "*Proceeding of the Epigraphical Society of India*", 1987 and hailed as a major contribution to the understanding of the evolution of the alphabetic writing (Pathak, 1986). The language of the Indus script is old Indo-Aryan, but some Iranian words also occur in the inscription. The Bet Dwarka inscription proves that the people were literate and spoke Sanskrit. The small seal of conch shell lends credence to the use of seal in Dwarka, to which a reference is made in the Harivamsa.

The underwater excavation recovered a copper lota, a fragmentary white marble statue. A pedestal of black stone with 4 pointed feet for embedding in the earth, it may be an altar; an alternate use as a quern may also be considered but there is no depression caused by rubbing. The perforated arches of brass which might have supported the canopy of a wagon-type chariot stood on a frame, in which an axle could be inserted. As revetting was known to the Harappans it is no wonder if the metalsmith of protohistoric Dwarka could also revet the bars and drive holes in the brass like metal. However, the stratigraphic evidence could not be of much help in dating this brass object.

Date

Thermoluminescence date of the Lustrous Red Ware from Bet Dwarka is 3520 years BP. The same ceramic ware is found in Dwarka and Somnath (Pradhabasa), another site of Mahabharata fame in Saurashtra and is dated 15th cent. BC. Secondly, the triangular three-holed stone anchors of Dwarka are analogous to those used in Kition (Cyprus) and Syria during the 14th-12th cent. BC. The Late Indus type seal and inscribed jar are datable to 1500-1400 BC. Among other antiquities of chronological value, the stone mould of Bet Dwarka, used for casting spear head shows Harappan affinity (Rao, 1988: 47-53).

Prabhasa (Somnath)

Somnath is mentioned in the Nasik cave-inscription of the time of Nahapana (AD 119–24) and also in Bhagavata Purana. The latter says that the town is situated on the seashore (X.45.38; X.78.18). According to the same text, sea voyage was undertaken by Krishna from Bhrgukachcha (Broach) to Somnath (Prabhasa). It was also visited by Arjuna and Balarama (X.86.2). The Mahabharata (118.15; 119.1–3) mentions Prabhasatirtha.

The ancient site of Prabhasa near Somnath, on the bank of the river Hiranya is divided by rain-gullies into five mounds, all of which must have once formed a continuous habitation site. Prabhasa was first excavated by the erstwhile Archaeological Department of Saurashtra and M.S. University of Baroda, in 1956 and then, in 1965. The importance of the excavation lies in revealing the overlap of chalcolithic and iron age cultures.

Four cultural periods are recognized here. Period I, called pre-Prabhasa culture, is represented by a pink ware. The time bracket of this period is 2000–1800 BC on the basis of ¹⁴C (non-calibrated) dating. Period II represents Prabhasa culture when Late Harappan pottery was also in use. This period is subdivided into early and late and dated 1800–1500 and 1500–1200 BC respectively. Among the Late Harappan shapes occurring here, the stud-handled bowl and dish-on-stand are noteworthy. Both bear panelled decoration characteristic of the Prabhasa ware. A large structure divided into a number of compartments built in the Late Prabhasa period (1500–1200 BC) appears to be a warehouse or a market place, which indicates its importance as a port and market town. The Prabhasa people used blades of chalcedony and obsidian, the latter being an import from West Asia. They were fond of beads of agate, carnelian and terracotta. The Harappan cubical weight was one of the trade mechanisms in use. A seal amulet of steatite, engraved with stylized deer, which may be of West Asian origin is found here. The gold ornaments and beads are indicative of the prosperity of Prabhasa in later days. The people used Lustrous Red Ware also in period II B (Ghosh, 1989: 348–50).

In 1991–92 offshore exploration at Somnath, carried out by the Marine Archaeology Centre of the National Institute of Oceanography, Goa, provides some encouraging results. The finds include a number of one-holed circular stones (Pl. XV) and also some stone blocks which might belong to ancient submerged structure, but further confirmation is necessary.

Nageshwar

Nageshwar village (22°17'N and 69°10'E), is 17 km north of Dwarka, the Taluka head-quarter of Okhamandal, in Jamnagar district of Gujarat. The village is famous for Nageshwar Mahadev temple, as it is locally believed to have one of the twelve Jyotirlingas in India. This site was excavated by M.S. University, Baroda.

Excavation revealed a Late Harappan phase comparable to Rangpur II B–II C. The ceramic assemblage of the site consists of plain, painted and incised Red Ware, Buff Ware, Grey

Ware and coarse Red Ware. The Red Ware is represented by the dish-on-stand, perforated jar, convex-sided bowl, stud-handled bowl, basin, storage jar, globular pot, lid and terracotta lamp besides dish-on-stand with dishes having projected rim and a sharp carination at the shoulder (Rao, 1963–64: 68–69). A dish with slightly beaded rim, a jar with bulbous body and projecting rim, storage jars with heavy rim found here are comparable to the pottery reported from Rangpur II A and II B (Rao, 1963: 2–207).

From all these evidences it is clear that the area around present Dwarka was regularly inhabited by the farmers, cattle-breeders and craftsmen of shell industry, in the Late Harappan period too.

Conclusion

Dvaraka, also known as Dvaravati, was a city/state with its administrative centre at Dvaraka and satellite towns or ports at Bet Dwarka, Nageshwar and Pindara. The overseas trade of Dvaraka is attested by the anchors and by the influence of Bahrainian art on the Bet Dwarka seal. The high level of civilization extolled in the epic is true to a large extent. The fortified city and its plan are symbols of economic prosperity, while the seal and inscription indicate literary advancement. Metallurgy had made great progress. The prosperity of Dvaraka and its satellite towns was due to shell-working, boat-building and overseas trade. It is obvious that underlying the many layers of myth in the Mahabharata, there is a nucleus of truth.

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