

# The Biggest Stone Anchors (Indo-Arab type) from Mithi Viridi, Bhavnagar, West Coast of India

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*A coastal archaeological exploration in Talaja taluka of Bhavnagar district, Gujarat, brought to light 5 grapnel stone anchors in an agriculture land. The site and these anchors are known as Bhima ka Khatiya ('Cot of Bhima', a famous character of Mahabharata). They are the biggest stone anchors ever found from anywhere in the world. The average length of the anchor is 4.9 m and the average weight is estimated to be about 3800 kgs. These anchors are generally termed as Indo-Arab type. The paper discusses the importance of these anchors with respect to their function.*

The Saurashtra coast has witnessed the rise of several ancient ports and centers of maritime activities since the Harappan period. The important sites such as Lothal (Rao 1991), Padri (Shinde 1992), Somnath (Sankalia 1974) and Nageswar (Hegde *et al.* 1990) have been excavated extensively. Evidences of overseas trade, salt production and shell fishing at these sites stress the importance of further investigations in the Saurashtra region.

Marine archaeological investigations by the Marine Archaeology Centre of the National Institute of Oceanography, Goa on the Saurashtra coast have been undertaken at Dwarka (Gaur *et al.* 2000), Bet Dwarka (Sundaresh *et al.* 2002) and Somnath (Gaur *et al.* 2002). The prospectons

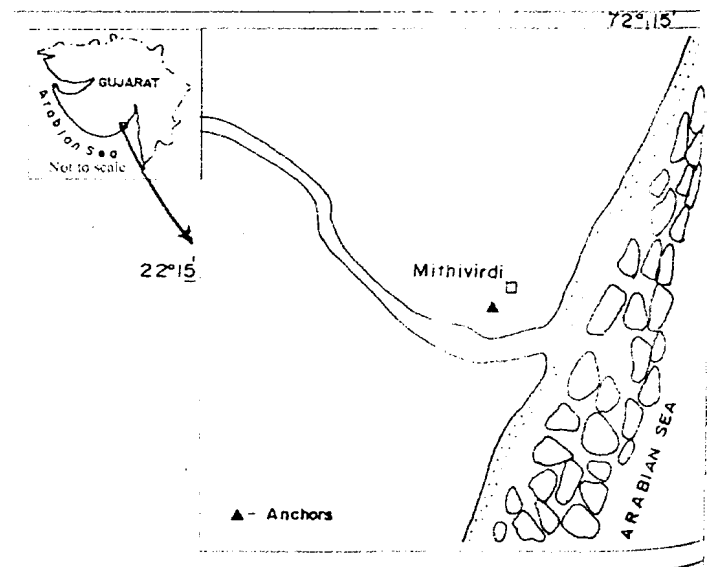


Fig. 1. Location of the site near Mithi Viridi have yielded antiquities and structures associated with ancient maritime activities. These include various types of stone anchors

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such as composite, grapnel and ring-stone types, remains of jetty and a large number of pottery dating from the protohistoric period to the late medieval period.

In the course of onshore exploration along the southern Saurashtra coast, an interesting site, locally known as *Bhima Ka Khatiya* ('Cot of Bhima'), was discovered near the village of Mithi Virdi. Here, five grapnel type of stone anchors were noticed lying in a field. The lower two holes of the grapnel anchors on either face of the section of stone block are similar to those found in the legs of wooden cots in any village in India. Being large in size, the local people associated these anchors with Bhima.

The site of Mithi Virdi is located about 30 km south east of Talaja, which is a taluka headquarters. The village lies on a raised plateau close to the seashore (Fig.1). A small seasonal river merges with the *sea* on the western side of the village. The archaeological site is located in a piece of cultivated land about a km from the village. The area comprises of reddish soil with small quartz gravel signifying the flow of river channel through this area. The nearest archaeological site to Mithi Virdi is the Harappan Early Historic site of Padri located about 30 km south-west of Mithi Virdi. Hathab, an early historical period site, is located about 20 km north-east of this village.

### ANCHORS

Five anchors (Fig. 2) were found lying in an agricultural land (groundnuts are the important crop grown on this field) about 1

km north of the seashore of the Gulf of Khambat. All the anchors are similar to each other in shape and size (Table 1). The anchors have rectangular cross-sections and trapezoidal longitudinal sections. These have sharp edges, and chisel marks on them are clearly noticed. They have been cut from conglomeratic sedimentary grit rock, which is dark brown in colour and small gravel can be noticed. The anchors have only lower two rectangular holes and the upper circular hole is absent in all the anchors. A brief description of each anchor is given below.

*Anchor 1.* This is the southern most of the group. The anchor tapers towards the upper side and chisel marks are noticed all over the body. The sections on both the ends are rectangular. The anchor has a rough surface and sharp edges. Two lower rectangular holes have chisel marks and one hole is not in a finished condition (Plate XId).

*Anchor 2.* The shape and size of this anchor is the same as that of anchor no. 1. However, it is broken (Plate XIc). Chisel marks are

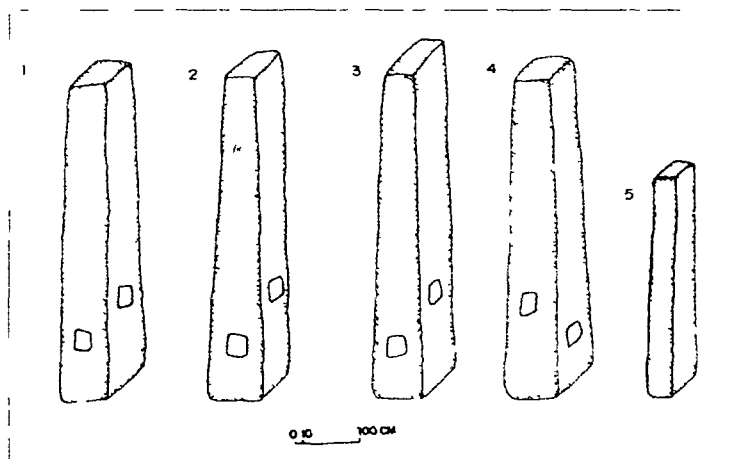


Fig. 2. Stone anchors from Mithi Virdi



**Table 1. Details of Indo-Arab type anchors from Mithi Viridi, Bhavnagar, Gujarat**

<i>Sl. No.</i>	<i>Raw material</i>	<i>Length (cms)</i>	<i>Lower/Upper width (cms)</i>	<i>Lower/upper thickness (cms)</i>	<i>Measurements of Holes (cms)</i>	<i>Estimated Weight (kgs)</i>
1	Conglomeratic rock	480	70/55	75/55	20X32, 20X30	4367
2	-Do-	490	77/48	60/50	22X30, 22X30	3871
3	-Do-	490	75/48	75/45	22X28, 22X29	4041
4	-Do-	480	75/48	78/45	22X30, 22X30	4399
5	-Do-	325	50/37	32/40	—	1323

Note: Weight of 1 Cubic m stone is 2600 kgs and then 10% correction applied to first 4 anchors.

noticed on the anchor. It has a rough surface and sharp edges. The sections on both ends are rectangular. A local resident of the village informed that this anchor had been broken in the process of shifting it from the field by the land owner. However, the land owner found it difficult to remove the anchor on account of its weight (3 tons estimated).

*Anchor 3.* This anchor lies north of the above two anchors (Plate XIb). Chisel mark are noticed all over the anchor, including in the lower two rectangular holes. A deep groove on the right side of the edge was noticed.

*Anchor 4.* The anchor lies in the southeast to northwest direction. This is partially buried in the earth (Plate XIc). Chisel marks are noticed on the anchor. Shapes and sizes are the same as the anchors described above.

*Anchor 5.* This anchor lies about 25 m north of the above group in the east-west direction. It has rectangular cross-sections and trapezoidal longitudinal sections. It is an unfinished anchor and does not have any hole on it. It has sharp edges and rough surface. The size of this anchor is smaller than the above four anchors.

## DISCUSSION

Marine archaeological explorations along the Indian coast during the last two decades brought to light a large number of stone anchors at Dwarka, Bet Dwarka, Aramda (Gaur *et al.* 2003), Somnath (Gaur *et al.* 2002), Vijayadurg (Sila *et al.* 1998), Sindhudurg (Sila and Gaur 1997), Goa waters (Sila *et al.* 2003) and Tamilnadu coast (Athiyaman 2001). These anchors are of the composite, grapnel and ring-stone types. However, the largest number of anchors fall in the second category, i.e., grapnel type. The important features of the five anchors discovered at Mithi Viridi are: (1) they are the biggest stone anchors ever reported, (2) all anchors do not have upper circular hole, (3) anchors have not been used as they are unfinished, (4) they are made of conglomeratic grit stone, which is locally available.

This is the fourth site on the Saurashtra coast where the so-called Indo-Arab type anchors have been noticed. The state of the anchors suggests that they have not been used and one of the anchors is actually



unfinished. Chisel marks are well preserved. They are made of locally available rock. The absence of upper hole suggests that either these anchors are unfinished or were prepared as mooring stones. As per local information fishermen noticed a similar type of anchor lying offshore. Similar type (but smaller in size) of anchors have been reported from many sites along the Indian coast and in the Sri Lankan waters (Souter, 1998). There is a possibility that these anchors were made for ritual purpose. However, there is an element of doubt on this point because *Bhima*, the great character of the Mahabharata with which the ritual story is associated, is now here associated with navigation. Moreover, the periods between the time of the *Mahabharata* and the period when these anchors were used are different. These are

Indo-Arab type anchors, which have been dated between 8<sup>th</sup> to 17<sup>th</sup> century AD on the Indian coast.

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