B.B. LAL

MANU'S FLOOD: A MYTH OR REALITY

In the *Śatapatha Brāhmaṇa* (1.8.1) there is a parable which states:

> In the morning they brought to Manu water for washing, just as now also they (are wont to) bring (water) for washing the hands. When he was washing himself, a fish came into his hands. (1)
>
> It spake to him the word. "Rear me, I will save thee.!" "Wherefrom wilt thou save me?" "A flood will carry away all these creatures: from that I will save thee!" "How am I to rear thee?" (2)
>
> It said, "As long as we are small, there is great destruction for us; fish devour fish. Thou wilt first keep me in a jar. When I outgrow that, thou wilt dig a pit and keep me in that. When I outgrow that, thou wilt take me down to the sea, for then I shall be beyond destruction." (3)
>
> It soon became a *Jhaṣa* (a large fish); for that grows largest (of all fish). Thereupon it said, "In such and such a year that flood will come. Thou shalt then attend to me (i.e. to my advice) by preparing a ship; and when the flood has risen thou shalt enter the ship and I will save thee from it. (4) (Sarasvati 1988: 301-02.)

The fish had predicted a flood that was to come in a particular year. The prediction came to be true. On the advice of the fish, Manu got a ship prepared, and entered into it. The fish then swam up to him; to its horn Manu tied the rope of the ship and with the help of the fish sailed swiftly up to the northern mountains. Again, as advised by the fish, Manu fastened the ship to a tree, and took shelter on the mountain. When the flood subsided, Manu gradually descended from the mountain (and, therefore, the slope of the northern mountain is called *"Manu's descent" (Manoḥ avasarpaṇam).* (Sarasvati 1988:312.)

The first question to be answered is: What is the date of the *Śatapatha Brāhmaṇa*? It is a very knotty question, since the dating of the Vedas to circa 1200 BCE by Max Muller had created a great deal of confusion. However, later on Muller surrendered by saying (*Physical Religion* 1890, reprint 1979):

> If now we ask how we can fix up the dates of these periods, it is quite clear that we cannot fix a terminum a qua [sic]. Whether the hymns were composed [in] 1000 or 1500 or 3000 BC no power on earth will ever determine.

The great pity is that in spite of such a candid confession by Max Muller himself, his blind followers even now continue to harp on the date of the Vedas as 1200 BCE.

Anyway, it has now been duly established that the *Ṛigveda* is pre-2000 BCE (Lal 2015:122). Thus, the *Śatapatha Brāhmaṇa,* being later than the *Ṛigveda*, is likely to be post-2000 BCE. At the same time, it is difficult to assign a precise date to it. It can only be an approximation. It is agreed to on all hands that the *Upaniṣad*s and the *Sūtra*s were the products of the first millennium BCE. Thus, the *Śatapatha Brāhmaṇa,* being earlier than the *Upaniṣad*s and *Sūtras,* has to be placed somewhere in the 2nd millennium BCE, most likely in the first half of that millennium.

Since the *Śatapatha Brāhmaṇa* refers to Manu's flood this event must have occurred before the composition of that text. Further, since there is no mention of any flood in the *Ṛigveda* it

is most likely that the event did not take place during the Ṛigvedic times. Thus, on purely literary grounds, the flood will be assignable to the 2nd millennium BCE, more likely to its beginning.

We may now turn our attention to the evidence of archaeology. There is a culture-complex known as the Copper Hoard Culture, because of the fact that the copper artefacts comprising this culture have often been found in hoards. Typologically, these artefacts include antennae swords, hooked swords, harpoons, anthropomorphic figures, shouldered celts, bar celts, rings, etc. Most of the time, these hoards had been found accidentally, either while ploughing an agricultural field, or digging the foundation trench for a house or digging a canal and so on. Up-to-date, there seem to be only three sites where there is duly excavated evidence to place the hoards in association with other objects. These are Sapai in District Etawah, Bahadrabad in District Haridwar and Sanauli in District Baghpat, all in Uttar Pradesh. While some of the Sapai artefacts (Fig. 1) were found accidentally, others were actually found in a regular excavation (Lal 1972).

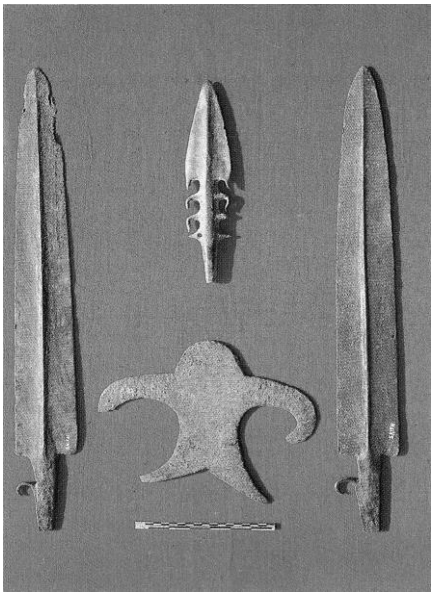

Fig. 1. Sapai: 'Copper Hoard' artefacts.

But what is important is that in the same deposit some pottery was also found. Since, on handling, the pottery left ochreous marks on the fingers, it was initially given the name 'Ochre Colour Ware/Pottery' (OCW/P). However, now we know that it was a red ware, often slipped and sometimes painted with designs in black pigment. It was due to water-

logging that the slip peeled off and the paintings got obliterated. Besides pottery and copper artefacts, the excavation at Sapai yielded balls, pounders, querns and rubbers – all of sandstone – and lumps of clay with impressions of reed. These lumps indicate that the houses were made of wattle-and-daub. In this context it must also be mentioned that the soil deposit in which these copper artefacts, pottery and stone objects were found was completely bereft of any regular habitation layers, such as floors or ash or charcoal deposits. The entire deposit, about one metre in thickness, was a mass of reddish brown clay merging with the natural soil underneath.

At Bahadrabad, the Copper Hoard was found while digging a canal. On receipt of information, Y. D. Sharma (1989) carried out excavation in the area and found a lot of pottery (Fig.2) but no more copper objects. The 1 ½ metre- thick deposit which yielded the pottery showed no stratification. It was a mass of brownish earth, without usual habitation layers, such as floors, charcoal, ash, etc. Of further interest was the fact that this pottery-bearing layer was overlain by about 6-metre thick deposit of sand and pebbles.

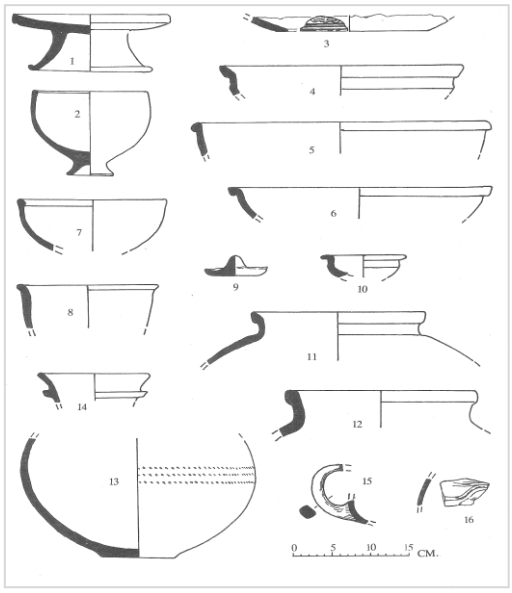

Fig. 2. Ochre Colour Pottery from Bahadrabad.

Sanauli, being on a higher level, has escaped the ravages which the afore-mentioned two sites had to suffer from. It is a burial site and in one of the graves an antennae sword has been found in association with the dead body. The pottery is a red

ware, often painted (D. V. Sharma, et al. 2006: 166 ff.)

As to the chronological horizon of the Copper Hoard-OCP Culture, it may be mentioned that we do not have any C^{14} dates, for the simple reason that no regular habitation levels which would have yielded charcoal or charred grains have been met with at any of the sites concerned. Thus, we have to depend on thermoluminiscence (TL) dating of the OCP itself. Sherds of this ware, from four sites, namely Atranjikhera, Lal Qila, Jhinjhana and Nasirpur were subjected to this method and eight dates received. Of these, three fall broadly between 2500 and 2000 BCE; two between 2000 and 1500 BCE; and two are later than 1500 BCE (Lal 1972). Thus, this Culture may approximately be assigned to the last quarter of the 3rd and first quarter of the 2nd millennium BCE.

Such a dating is also suggested by another kind of evidence. At Lothal, the well known Harappan site in Gujarat, a part of an anthropomorphic figure was found in Phase IV (Rao 1985: 536), which would mean that there was some contact between the Copper Hoard Culture and the Harappan towards the last quarter of the 3rd millennium BCE. A similar dating for the Copper Hoard is suggested by the occurrence of a terracotta tablet at Harappa, which depicts a man wielding a harpoon for sacrificing a buffalo in front of Śiva (Kenoyer 1998: Fig. 6.24).

From the foregoing it is clear that the Copper Hoard-OCP Culture may have existed in the last quarter of the 3rd millennium BCE and continued into early 2nd.

We now pass on to the most crucial aspect of the issue. It relates to the nature of the deposits in which the Copper Hoards and/or OCP have been found. To recall, measuring from ½ to 1 ½ metres in thickness, these deposits are completely bereft of any structures, floor-levels, ash, charcoal, etc. The soil is usually dark brown earth sometimes mixed with sand in which the potsherds lie in a higgledy-piggledy manner. More or less similar is the case with the copper artefacts. This soil imperceptibly merges into the natural soil underneath. If this was the situation just at one or two sites we would have thought it to have been an aberration. But the fact that this is the situation at all the sites, from Bahadrabad in the north to Sapai

in the south and from Jhinjhana in the west to Ahichchhatrā in the east – an area covering almost 60.000 square kilometres, sets one thinking about the probable cause(s) of such a situation. [In fact, there are many more OCP sites, further to the east, not shown on the map; Fig. 6 below]

The late Dr. B.B. Lal, Chief Archaeological Chemist of ASI, and his colleagues who examined the soil-samples from Jhinjhana, Nasirpur, Ahichchhatrā, etc. were of the view that the deposits may have been 'water-laid'. Professor Fakhruddin Ahmad, the then Head of the Department of Aligarh Muslim University, who studied the samples from Atranjikhera, opined that 'the area had been flooded by the river and remained water-logged for a considerable period which may explain the absence of the usual habitation marks.'

This suggests that most likely there was incessant rainfall over a long period or/and a heavy discharge in the river-systems which inundated these sites. As a result of this 'deluge' all the lighter material, like ash, charcoal, mud-floors, was washed away, while the heavier material, like copper artefacts. pottery and stone objects, settled down locally, though in a haphazard manner. Such a thing happens even now almost every year when heavy floods due to incessant rains for even 4-5 days engulf villages with wattle-and-daub houses. After the flood what remains on the spot are only a few odd objects telling the story.

While we do not have any data about the rainfall in ancient times, we do have some important evidence about an unusually high water-discharge into the Yamunā-Gaṅgā system, which is as follows.

It relates to the history the Sarasvatī, which is a river par excellence in the *Ṛigveda.* She has been eulogized as the best of mothers (*ambitame*), the best of rivers (*nadītame*) and the best of goddesses (*devitame*) [*RV* 2.41.16]. She originated in the mountains and went all the way down to the sea (*yatī giribhya ā samudrāt*) [*RV* 7.95.2]. She was so powerful that she shattered the mountain peaks with her fast and powerful waves (*iyam śuṣmebhir bisakhā ivārujat sānu girīṇām taviṣebhirūrmibhiḥ*) [*RV* 6.61.2].

V.M.K. Puri and B.C. Verma (1998), who have done a thorough study of the Sarasvatī in the Himalayan terrain, have shown that it originated from the Sarasvatī, Jamadar and Rupin Glaciers and, winding its way through the hills, pierced the Shiwalik range at Adh Badri and descended on the plains (Fig. 3).

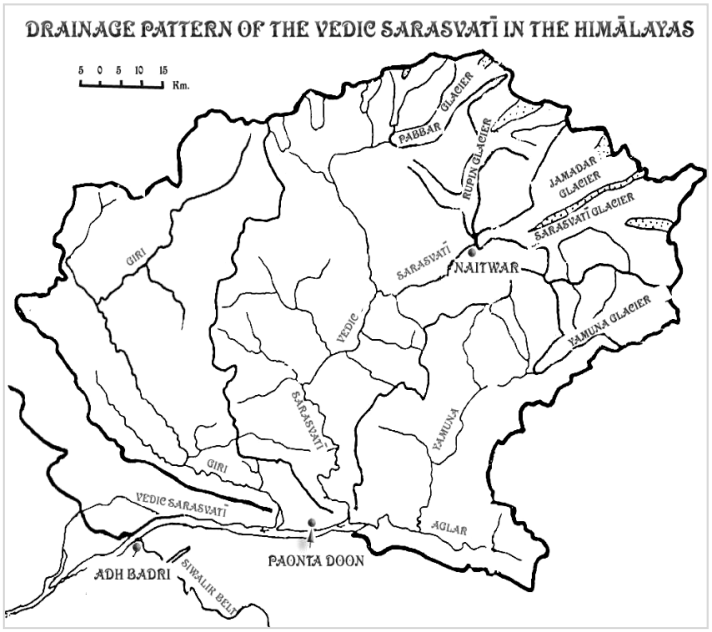

Fig. 3. Drainage Pattern of the Vedic Sarasvatī in the Himalayas.

Descending on the plains, the Sarasvatī waded its way through Haryana and Rajasthan in India and then entered Pakistan where it coursed through Cholistan and Sindh, finally debouching into the Arabian Sea.

In its basin in Haryana, Rajasthan and Cholistan, a large number of sites, ascribable to various stages of the Harappan (also known as the Indus or Indus-Sarasvatī) Civilization, have been discovered, many of which have also been excavated. One of these is Kalibangan, located on the left bank of the Sarasvatī in Hanumangarh District of Rajasthan (Fig. 4).

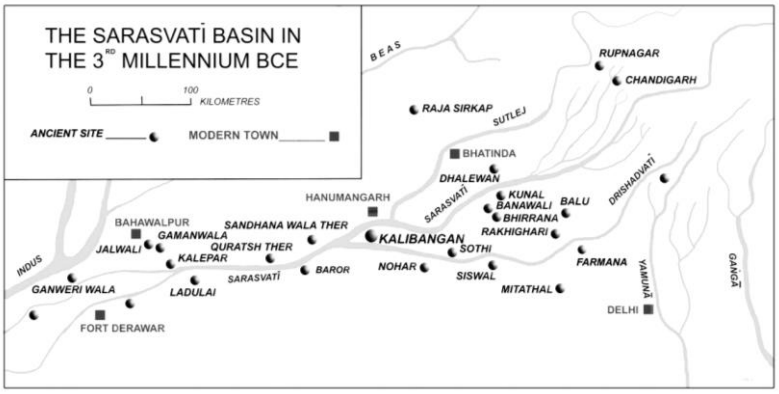

Fig. 4. The Sarasvatī Basin in the 3rd millennium BCE.

The river is now dry. It was, therefore, natural for us to find out when and how it dried up and what were the consequences. Thus, a team of Indian and Italian hydrologists, under the leadership of Robert Raikes, bored several holes in the bed of the river. Summing up his findings, Raikes published a paper in *Antiquity* (1968) which he captioned 'Kalibangan: Death from Natural Causes'. Kalibangan had to be abandoned because of the drying up of the Sarasvatī. According to the C^{14} dates, the abandonment took place around 2000-1900 BCE (Lal 1997: 245-46).

Though we duly got the answer to the 'when?' of the drying up of the Sarasvatī, the answer to 'how?' had yet to come. In this context, we refer back to the paper of Puri and Verma (1968). In the course of the field work, these geologists discovered that, owing to severe tectonic movements in the Himalayan region there shot up a 30-metre high ridge, known as the Bata-Markanda Divide, which blocked the passage of the Sarasvatī. Since water must find its way out, the river had to reverse its course. Finding an opening in the form of the Yamunā Tear near Paonta, the river entered it and joined the Yamunā itself (Fig. 5).

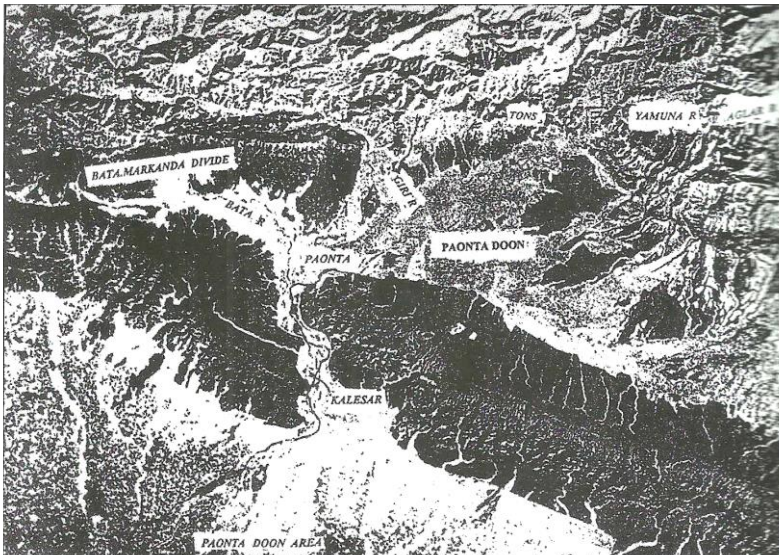

Fig. 5. Appearance of the Bata- Markanda Divide which blocked the passage of the Sarasvatī. The river had to reverse its course and, passing through an opening near Paonta, joined the Yamunā. The result: A Deluge in the Yamunā-Gaṅgā basin.

What must have been the horrendous affect of the Sarasvatī joining hands with the Yamunā is beyond imagination – a mighty deluge affecting a major part of the upper Yamunā-Gaṅgā basin. As a result, hundreds of settlements must have been drowned and even washed away. This is exactly what did happen as evidenced by the total destruction of the OCP-Copper Hoard sites in the upper Yamunā-Gaṅgā basin (Fig. 6).

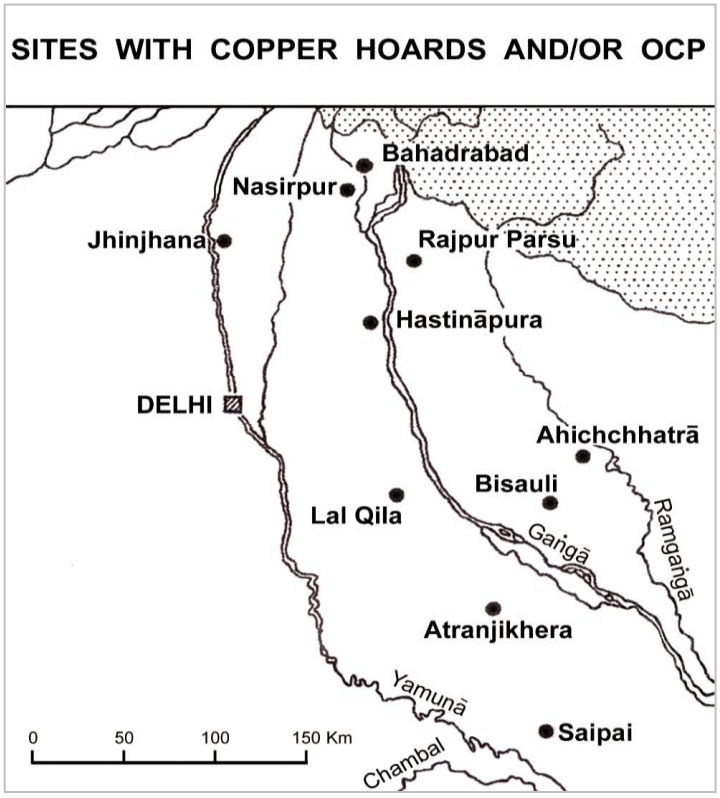

Fig. 6. All the Copper Hoard and/or OCP sites shown on this map were severely affected by the deluge which occurred at the beginning of the 2nd millennium BCE.

Archaeologically, this event took place around 2000-1900 BCE or say broadly in the first quarter of the second millennium BCE. This was exactly the time of Manu's Flood, which, as shown in the earlier part of this paper, occurred after the *Ṛigveda* and before the *Śatapatha Brāhmaṇa* i.e. in the first quarter of the second millennium BCE.

Should we still call Manu's Flood a myth?

REFERENCES

Kenoyer, J.M. 1998. *Ancient Cities of the Indus.Valley Civilization.* Oxford University Press and American Institute of Pakistan Studies, Karachi.

Lal, B.B. 1968. "A deluge? Which Deluge? Yet Another Facet of the Problem of the Copper Hoard Culture", *American Anthropologist,* No.70: 857-63.

Lal, B.B. 1972. "The Copper Hoard Culture of the Gaṅgā Valley", *Antiquity,* XLVI, 282-87.

Lal, B.B. 1997. *The Earliest Civilization of South Asia.* Aryan Books International, New Delhi.

Lal, B.B. 2015. *The Ṛigvedic People: 'Invaders'?/'Immigrants'? or'Indigenous'?: Evidence of Archaeology and Literature.* Aryan Books International, New Delhi.

Muller, F. Max. 1890, reprint 1979. *Physical Religion.* Asian Educational Services, New Delhi.

Puri, V.M. K. and B.C. Verma. 1998. "Glaciological and Geological Source of Vedic Saraswati in the Himalayas", *Itihas Darpan,* Vol. IV, No. 2:7-36.

Raikes, Robert. 1968. "Kalibangan: Death from Natural Causes", *Antiquity,* XLII: 286-91.

Rao, S.R. 1985. *Lothal: A Harappan Port Town (1955-1962).* Archaeological Survey of India, New Delhi.

Sarasvati, Svami Satya Prakash 1988. *The Critical and Cultural Study of the Śatapatha Brāhmaṇa.* Govindram Hasanand, Delhi.

Sharma, D.V. et. al. 2006. "Excavations at Sanauli", *Puratattva,* No.36: 166 ff.

Sharma, Y.D. 1989. *Bahadrabad.* In A.Ghosh (ed.), *Encyclpaedia of Indian Archaeology*, pp. 37-39. Munshiram Manoharlal, Delhi.