A PREHISTORIC VIEW OF THE THERMAL SPRINGS OF INDIA

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ABSTRACT

The Indian geothermal springs are the centres of myth and religious beliefs in the ancient as well as in the modem Indian civilisation. The ancient culture and mythology of India is still alive and is followed by the educated and common people. The Indian geothermal spring sites hear testimony to this belief. Shivs, the god who tamed Ganga during her descent from Heaven, is the ruling deity at these spring sites. The ancient Indian civilisation's valuable contribution to modern India is its recognition of the medicinal powers of the thermal springs.

Key words: Ancient Indian Civilisation; 'Panchabhulas'; Therapeutic powers; Shivalinga; Thermal spring.

1. INTRODUCTION

The Indian subcontinent hosts nearly 320 thermal springs which are located along major faults and subduction zones. Indian history did not make any reference lo the age of these springs. However, since these springs are associated with basaltic volcanism and rifts, it may be assumed that they must have started flowing before the human civilisation.

Ancient Indian civilisation is one of the longest in the course of world history and is beset with myths and religious beliefs. Its mythology is entirely different from that of the west and centres around gads, demigods and spirits. It is still a part of the living culture followed by the scientific and non-scientific society. This culture is clearly evident when one visits any of the 320 thermal springs in India. These thermal springs are considered lo be with "divine power" and being the gift of God. A reference was made about the magical powers of the 'rarified waters' (a term used by Megasthencs-a Greek ambassador who visited India in the 3rd century B.C, for waters having extraordinary powers) in the literature on Indian history (Kalota,1978). The medicinal values of the springs and beliefs/myths attached to these holy waters are reported in Indian history. The available information in the Indian historial records on the thermal springs is documented in this paper.

2. INFORMATION FROM ARCHAEOLOGICAL EXCAVATIONS

Many Indian archaeological excavation sites are located far away from the thermal springs except for the Devnimori excavation site which is located north east of the Tuwa thermal springs (Lat:22 45-22 50 N: Long: 73 22-73 29E), Gujarat State. Devnimori is a village in Gujarat. Archaeological excavations unearthed several ancient Shiva temples (Shivalinga temples to be precise) and Buddhist Stupas(tombs) in this area. The legendary belief among the villagers and pilgrims visiting these springs (based on the information collected by the author during his interview with the pilgrims) is that when 'Pandavas' (characters in the epic Mahabharata-the store house of myths) under exile were passing through this route, Draupadhi requested one of her husbands to fetch some water lo quench her thirst. In response to her request. Bhima, not finding any source of water in this area. punctured the earth with his arrow which made a hole through which water started flowing. The discovery of a 'Hanuman' temple during the excavations lends support to this belief. This belief made the Hindu settlers consider this place as a sacred place of worship hy constructing Shiva and Hanuman temples (Hanuman and Bhima were 'Vayu Putras' -sons of Vayu). The reason for making Shiva the deity of worship at this site (and in general at almost all the thermal spring sites in India) is that the ganga (refers to water) flows through the Goddess Ganga silting over Shiva's head. The Hindu mythology states that when Ganga descended from the great Himalayas, Shiva,to break the fall,stood below the mountains and allowed the water to flow through his matted locks and divided it into seven rivers. Thus in the Hindu mythology Shiva and Ganga are inseparable. Four Shivalinga temples were excavated in Devnimori (Mehta and Chowdhary, 1966). Subsequent to Hindu settlers, the Buddhists who migrated to different parts of this country, also considered this place as sacred, and established their camps there. The presence of Buddhist tombs lends legendary support to this belief.

The sacred beliefs held by the ancient Indians made strong roots in the modem Indian civilisation as well, and all the thermal spring sites have become sites ofworship and centres of pilgrimage today. Thus, at each spring site a Shiva temple exists today. For example, the Shiva temples at Vajreswari, Ganeshpuri and Rajapur in Maharashtra; the Shiva temple at Manikaran; the Shiva temple at Taptapani,Orissa lend support to these beliefs.

3. THERAPEUTICAL VALUE OF THE THERMAL SPRINGS

Besides giving a holy status to the thermal springs, the ancient Indian civilisation realised their therapeutical value and considered the waters good for curing certain diseases. Mention was made by Megasthenes about the medicinal value of Indian waters. He considers them as rarified waters as a result of which Indians have acquired intellectual powers in the field of arms and craft and were long lived compared to the Greeks. Though the meaning of rarified waters was not defined, it may be interpreted as waters rich in minerals and gases. The thermal springs can be considered as such type of waters. This could be the reason why the thermal spring sites were extensively utilised for bathing. Ancient kings. including the Mughals, who invaded India, constructed tanks for bathing. The belief that the waters cure certain diseases is not new to the modern civilised India.

The therapeutical powers of certain Indian springs *are* given in Table 1.

It has been described in the ancient Indian medical science "Ayurveda" that water is the main component in curing many diseases and water is considered as one of the 'Panchabhutas'. The 'Panchabhuta' theory is 'Upanisadic' in origin and the `Rigveda', one of the four vedas followed by the ancient Hindus,recognises water as the first element in 'Panchabhutas'. The 'Panchabhutas' *are:* 'Prithvi (earth);ap (water); tejas (fire); vayu (air); and akasa (sky)'. These 'Panchabhutas' became the doctrine of the integrated concept of Hindu orthodox system which was later followed by the Buddhists and the Jains as well (Subbarayappa,1970). Thus water as the primary component in curing diseases and keeping the body healthy was recognised since vedic times and is still followed by the modern civilisation.

The Mughals who invaded India later (1398) paid less attention to the medicinal or religious values of the thermal springs and developed beautiful gardens using all the available water sources (Rawlinson, 1954: Geoffrey and Susan Jellicoe, 1975).

After the fall of the Mughal dynasty, the Hindu faith on the thermal springs was revived and is continuing now.

The post independence India realised the medicinal value of the thermal springs and many workers carried out extensive chemical analyses of the thermal spring waters (Gosh,1954; Chaterjee, 1958; Banerjee,1967). The curative powers of the springs lie in the radon and sulphur present in them. These springs contain high radon content (of the order of 9 millimicrocurie per litre) and sulphur (Banerjee,1967).

The idea of exploiting the thermal springs for commercial purposes emerged in 1940 by the Geological Survey of India because the quality of water from these thermal springs is comparable to that being imported from European countries(Chaterjee,1958). Thus those springs which were free from religious significance were selected for this purpose and they are grouped into two- medicinal waters and table waters. Water from Surajkund, Kawa Gandhawan in Bihar were grouped under 'Medicinal water' and water from Phillips Kund, Rishi Kund, Rameswar Kund and Lachmiswar Kund in Bihar were grouped under 'Table water'. M/s G.F. Kellner and Co. started bottling the thermal spring waters for the above purposes during the pre war period (second world war) but later it was abandoned (Chaterjee,1958). The list of certain important European waters which India was importing prior to world war II and the Indian thermal springs which have chemical and medicinal properties similar to those of European waters is given in Table 2.

4. CONCLUSION

Though modern science is able lo explain the origin of these springs and their mystical powers,the modem Indian civilisation (the educated and the common people) still consider them as the divine manifestation of God. This religious belief together with the therapeutic powers of the thermal springs made the ancient Indians consider these sites as pilgrimage centres. This belief is deep rooted in modern Indian civilisation also-a fact which is seen from the large number of pilgrims visiting these sites.

One of the remarkable features of Indian mythology is its homogeneity over the entire continent- a fact which is evident from the presence of 'Shiva' temples at almost all the spring sites. India retained the ancient beliefs and myths as a result of which these springs sites continue to be centres of worship and pilgrimage. The depth to which thcsc beliefs have penetrated into the educated and common Indian public masses can be seen from the number of intelligentsia visiting these springs. The therapeutic powers of these springs further strengthen these beliefs among the Indians. These beliefs have even penetrated into other religions of India.

TABLE 1. Indian Thermal Springs and their therapeutic value

Location of the spring	State	Therapeutic value
Vajreswari	Maharashtra	cures leprosy, gout,
Ganeshpuri	Maharashtra	goitre, paralysis.
Rajapur	Maharashtra	Cures rheumatism
Taptapani	Orissa	Cures skin ailments
Anhoni	Madhya Pradesh	Cures skin dieseases
Rajgir	Bihar	Cures rheumatism, paralysis,dyspepsia, leucoderma.

TABLE 2. European waters and their Indian equivalent.

Name of the thermal spring	European water (Sweden,Italy Austria)	Therapeutic value of European water
Rajgir. Bihar	Evian	Cures metabolic disorder.
Bridkhal, Uttar Pradesh	Apollinaris	Table water
Kawa Gandhawan, Bihar; Anhoni, Madhya Pradesh.	Vichy	Hyperacidity
Suraj Khund, Bihar; Sahasra Dhara, U.P.	Trinlquelle Aix-les-Bains	Dry eczenia, neuralgia Catarrah Of lungs.
Vajreswari, Bombay Unhavre, Maharashtra	Marienquelle Leamington	Blood pressure, arthritis,neuritis, urinary infection.

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