

There was a Sarasvati

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Ek Thi Nadi Sarasvati (Khadg Singh Valdiya), 2010, Aryan Books International, New Delhi, pp. 111

It is said that one might acquire the virtue of taking a daily bath in the sacred rivers of the Ganga, Yamuna, Godavari, Sarasvati, Narmada, Sindhu, and Kaveri by chanting the mantra:

ॐ गङ्गे च यमुने चैव गोदावरी सरस्वती |
नर्मदे सिंधु कावेरी जलेस्मिन् सन्निधिं कुरु||

Millions of Hindus have revered the river Sarasvati for centuries, believing it to meander across the vast Gangetic plains and meet the Yamuna and Ganga at the *sangam* at Prayaga. That may seem strange to some people because the river Sarasvati is physically non-existent today. But thanks to a combination of archeological evidence, contemporary technology like NASA's LANDSAT and Indian Remote Sensing satellite data, and ongoing efforts to locate and excavate the numerous cities of Harappan civilization, we can confirm that this enormous river existed in the past and that many of the civilization's major cities were built along its banks.

Where had the river disappeared? How can we demonstrate that the Sarasvati played a crucial role in civilization? These inquiries Prof. Khadg Singh Valdiya carried forward in this book. As a professional geologist, Prof. Valdiya has been investigating the disappearance of the Sarasvati River since the early 1960s. He authored an article back in 1968 on the Ganga and Satluj robbing the Sarasvati of its water. In 1984 he wrote *Sarasvati: The River That Disappeared*, a book that chronicled the tragedy of the Sarasvati. He has since written and spoken frequently about the tectonic upheaval in the northwest region of the Indian landmass. According to him, this is a translation of the same book. In this book, he investigates

the presence of a powerful river that is snow-fed, traces the river's path from the foothills of the Himalayas to the Arabian Sea, and describes the development of human habitations alongside the river. Examining this matter primarily within the context of geological parameters, he draws attention to the geological occurrences that engulfed the region and caused the river—which served as the inhabitants' lifeline—to vanish from the floodplain.

The book has seven chapters. Valdiya narrates in the first chapter, "The Land without Rivers," how the riverless area in front of the Himalayas between the Ganga and Sindhu rivers' flood plains, which is currently a desolate region of arid wastes, was formerly vibrant. This is confirmed by the remains of several Stone Age habitation sites and Harappan towns discovered in the paleo valley of the Sarasvati, which are identified with the modern-day Ghaggar in Haryana and Rajasthan, Hakra in Pakistan, and Nara in Sindh. We have satellite photographs of many extra-wide underground channels in this area that are currently dry except for floodwater. Furthermore, he mentions the presence of freshwater reservoirs that date back thousands of years and are still intact despite heavy use in the Centre of the desert. All of this, in his opinion, points to the existence of a perennial, hidden, underground water source in this region. The Sarasvati River was mentioned several times in the Rig Veda. Renowned in the Rigveda as a "mighty" river that flows "from the mountain to the sea," the Sarasvati is said to be disappearing in the desert a few centuries later in the Mahabharata, a story whose major war takes place in the Kurukshetra region, which is irrigated by the river and its tributaries.

Richly illustrated with maps, diagrams, and satellite images, the second chapter, "Geological History of Sarasvati Terrane," discusses the formation of the Sarasvati-Sindhu Plain, its structure, tectonics, and the reasons behind the tectonic turbulence in this region, which resulted in the rivers' repeated changes in course, branching off, and changing directions. In the region of

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Haryana and southwestern Rajasthan, there is a massive network of deserted paleochannels, as shown by satellite pictures. Records found in the sediment-succession sequence also suggest the presence of a powerful river in this region. The examination of sediments found in Ghaggar's paleochannels reveals the presence of minerals with a Himalayan provenance. A fascinating map of northwest India in the chapter, displaying the epicenters of earthquakes from 25 BCE to 1993 illustrates the continuous impact of tectonic movements on the region. The river dried up and had plenty of water between 10,000 and 3900 years ago due to changes in the climate. It appears certain that the extended dry spell that ensued played a role in the ultimate disintegration of the Sarasvati.

The third chapter, "The Path of Sarasvati," explores the path of a little stream named "Sarsuti," which originates in Shivalik and eventually disappears in Ghaggar, as well as the course of the Sarasvati River. According to Valdiya, Sarasvati, which had its origins in the Himalayas, flowed via the Sarsuti channel for 3,375 years until eventually picking up water from Ghaggar and moving westward as is apparent in satellite pictures. The middle sections of Ghaggar appear to be 6–8 kilometers wide. The presence of fossilized waters in the sediments of paleochannels found in the desert region is unmistakable evidence that these paleochannels are a remnant of an old river that has long since dried up. Situated in the saline marshy depression of the Rann of Kutch, opposite the remnants of a delta, is the location of an ancient seaport that speaks loudly of a navigable river that formerly flowed up to the point of this port and discharged into the Arabian Sea.

"Peoples of the Land of Sarasvati," the fourth chapter, discusses the pre-Harappan settlements, early Harappan culture, the newcomers, the hospitable environment in the northwest of the subcontinent, and the Harappan civilizations blossoming. The Sarasvati basin, Gujarat, Baluchistan, and the Indus base are known to be the civilization's many heartlands, as stated by Valdiya. With two major rivers at its heart—the Sarasvati and the Indus—it was a densely populated area. He attempts to snoop around in urban dwellers' daily lives and how their culture interacts with the outer world. The evidence of trade with foreign countries is abundant. Weights and measures were standardized. There did not seem to be any conflict or war in the realm. We discover assembly halls, granaries, citadels, a large central bath, fortifications, and broad streets that were oriented in the cardinal directions. There was an egalitarian culture. The astonishing traits that the Harappan towns brought to the common people—that is, the absence of kings despite the existence of elites—were more significant to the common people than the opulent quarters for rulers. The

bathrooms in the majority of homes were constructed on sloping platforms made of tightly fitting burned bricks, and the wastewater was directed to a collective sewer via a drain located through the exterior wall. The latter was linked to a system of neatly placed baked brick drains. There was an ample supply of water to support this feat of engineering. For instance, there were an estimated 600–700 wells in the city of Mohenjo-Daro. Secondly, this made water-based ritual purification possible. This religious component has survived.

The fifth chapter, "Disappearance of the Sarasvati," explores the causes of the large-scale exodus of people from the expansive floodplain who relocated upstream in the Himalayan foothills and downstream along the coast. Valdiya concludes that the high-up headwaters were relocated as a result of tectonic plate motion. Instead of flowing into the Sarasvati, the water now offered its gift to the Sutlej River, which eventually flowed westward into the Indus, and to the Yamuna, which eventually flowed eastward. The river Sarasvati was ultimately pushed by these geologic upheavals to descend into the sand, with its banks receding, occasionally disappearing, and reappearing *en route* to its new terminal in the huge mud flat known as the Rann of Kutch. The great exodus of people from Mohenjo-Daro, Kalibanga, and other locations between 3900 and 3700 years ago corresponds with this change in the Sarasvati River's course. According to him, a drought struck this region 4,800 years ago. The water from the perennial Sarasvati River helped the cities and villages of Harappa develop despite the drought. People's lifestyles became more refined, and a variety of crafts, the arts, and technology evolved. However, there was a huge migration when Sarasvati lost all of its water, and its flow abruptly decreased.

The next chapter "Aftermath of Sarasvati's Tragedy," explains how the absence of the river drove the Harappans in various directions, mainly eastward toward the Ganga plains. Known as the post-Harappans, they returned to living in rural areas while preserving elements of their culture. A multitude of regional cultures emerged, primarily focused on agriculture and with a restricted geographic scope.

The topic of cultural homogeneity over space and time is covered in the seventh chapter, "River Sarasvati and Harappan Civilization in Rigveda and Mahabharata." Valdiya thinks there are numerous connections between the Vedic and Harappan cultures. The river Sarasvati is highly revered in the Rigveda. Satellite photos and archaeological data from over 2600 mature Harappan cities located over 10 lakh square kilometres, between 4600 and 3900 years ago, confirm this. The Rigveda describes Vedic Aryans as performing yajna and residing in walled towns. We get evidence of fortified cities and fire altars

from various Harappan locations. The Rigveda mentions *sabha* and *samiti*, which stand for republican systems. Evidence points towards an egalitarian society in the Harappan civilization. The epic Mahabharata discusses things relevant to the late Harappan and post-Harappan periods. Sarasvati began to diminish and develop into lakes in the late Mahabharata period, which is consistent with the geological history. He concludes that early Vedic civilization corresponds with the Harappan, and later Vedic culture corresponds with the Painted Grey Ware culture, which is dated between 2800 and 2400 years ago.

It is now evident that environmental and climatic disturbances were a significant factor in the disintegration of the Harappan culture. Legends explaining Sarasvati's departure are reported in the later Mahabharata, the Puranas, and even in later literature. However, the conclusion of each story was the same: the river was destined to flow into the desert. The Vedic civilization may be the Indus-Sarasvati civilization. The distribution of settlements in the Sarasvati basin now showed that most Harappan sites were abandoned in the central region, which roughly corresponded with the end of the Harappan civilization's urban phase and included parts of southern Punjab, northern Rajasthan, and southwest Haryana. It is obvious that the river system broke down, and archaeologists now believe that this was a factor in the decline of the illustrious Harappan civilization between 3900 and 3700 years ago.

For those who enjoy history, this book is a delight. This book attempts to reconstruct the course of the Sarasvati River through a variety of sources, including the Rigveda and the Mahabharata, as well as empirical and contemporary geological, geomorphological, geohydrological, and metrological records. Based on these sources, he emphasized that the old Sarasvati was created by the Yamuna and Sutlej rivers coming together, with the primary portion of its course being along the Siwalik-fed Ghaggar River and its tributaries. Many events, including the beginning of a drier environment in western India and the tectonic processes in the Aravali and the Himalayas that caused the rivers to be captured and deflected, have been suggested as causes for the loss of the Sarasvati, continuously receding and finally becoming "mythical," moving to become an "invisible" river at the Ganges-Yamuna confluence. There seems

little reason to doubt Valdiya's assertion after reading this book, and I can state with certainty that India's long-lost river is real and not just a myth. The compelling evidence that links the Vedic to the Harappan, which Valdiya presents in this book, is all very convincing. The book is incredibly instructive. His presentation of a scientifically accurate perspective based on quantifiable data and observable phenomena is facilitated by the extensive use of maps, illustrations, tables, and satellite imagery.

However, one question that intrigued me is that the books generally dealing with this part and period of history also talk about issues or arguments surrounding the Aryan invasion, migration, or their indigenous origins, but Valdiya doesn't go into this debate. It appears that he accepts the migration theory. There are two instances throughout the book that attest to this. He claims at one point that similar molecular genetic markers studied using mitochondrial DNA (Type 8-1) indicate a close genetic link between the people of India and those of Central and West Asia. He then persuades us to assume that a migration from these regions occurred between 10,000 and 8000 years ago. Then, in a different chapter, he discusses the fight between the native residents and the Rigvedic *jana*, who came across the mountains. He refers to them as "newcomers," or Rigvedic *jana*, who used to call themselves 'Arya' or 'noble men' and their land 'Aryavarta'. This theory conflicts with existing scholarly opinions on the matter. One view on the relationship between the Sarasvati and the Ghaggar-Hakra holds that the composers of the Rig-Vedic hymns had to have resided in the area by the third millennium BCE at the latest; however, since Harappan settlements are the only ones known to exist from that era, they frequently maintain that the Harappans were among the Vedic people. Conversely, researchers supporting Aryan migration talk about the possibility of a pre-Vedic Harappan culture and date Aryan migration around 1500 BCE. Considering this, we may deduce that the book's primary goal is presumably to present the geological history of the land of the Sarasvati River, its disappearance, illustrate the similarities between Harappan and Vedic culture, and less on the authorship of Sindhu-Sarasvati civilization. And it appears that this book is successful in achieving its goal.