

The study on Ganges's water

Y. V. Subba Rao *

Abstract:-

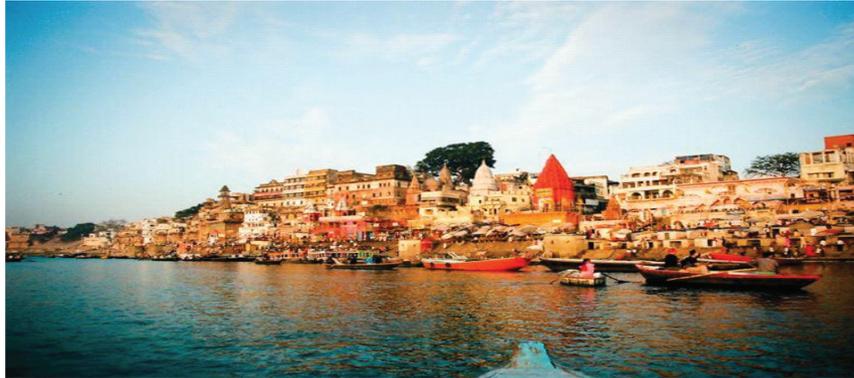
The river Ganga(Ganges) is considered to be a sacred river with mystical healing powers and it plays a very prominent role in Hindu mythology. This paper elaborates the recent scientific studies corroborating with the inscriptions of the ageless Vedas on Ganges's water having "mysterious" healing properties that gives Ganges water its mythical reputation.

Keywords: River Ganga, holy river, healing powers of Ganga, testing the waters of Ganga, CSIR study on Ganga

Introduction:-

The Ganga, our National river is the largest river of Indian subcontinent, flowing east through the Gangetic plains of northern India into Bangladesh (Fig.No.1). The 2510 Kms river rises in the western Himalayas in the Utrakhand . The average depth of the river is 52 feet & the Maximum is 100 feet. According to Hindu mythology, Goddess Ganga – the daughter of heaven, took the form of a river to absolve the sins of King Bhagirath's predecessors, following his severe penance of several centuries. Lord Shiva received Ganga into his matted locks to minimize the impact of her fall. The actual source of Holy river Ganga is at Gaumukh, set in the Gangotri Glaciers and is a 19 Kms. trek from Gangotri.

Figure 1 - Ganga River:-



* Former Visiting Professor, Dept. of Jyotisha, Rashtriya Sanskrit Vidyapeetha, Tirupati

The river Ganga occupies a unique position in the cultural ethos of India. Legend says that the river has descended from Heaven on earth as a result of the long and arduous prayers of King Bhagirathi for the salvation of his deceased ancestors. From times immemorial, the Ganga has been India's river of faith, devotion and worship. Millions of Hindus accept its water as sacred. Even today, people carry treasured Ganga water all over India and abroad because it is "holy" water and known for its "curative" properties. However, the river is not just a legend, it is also a life-support system for the people of India.

The river Ganga is considered to be a sacred river with mystical healing powers and it plays a very prominent role in Hindu mythology. For instance, it is believed that bathing in the river Ganga can wash away sins so that a person can attain salvation. Traditionally, a little water from this river is given to people in their final moments of life to ensure that their soul goes to heaven. According to Hinduism, every follower should bathe in the Ganga at least once in their lifetime. While this is so, there exists many educated disbelievers who claim it as a mere myth.

Hindus have always believed that water from India's Ganges River has extraordinary powers. The Indian emperor Akbar called it the "water of immortality" and always travelled with a supply. The British East India Co. used only Ganges water on its ships during the three-month journey back to England, because it stayed "sweet and fresh."

Vedic Inscriptions:-

Ganges is also known as Jâhnavi since she became the daughter of sage Jâhnu. When Bhagiratha was escorting the Ganges, she inundated the sacrificial field of the sage Jâhnu, who became annoyed at her intrusion and swallowed her. But at the supplication of Bhagiratha the sage permitted the river to come out of his ear. That way she became Jâhnavi.

Bhagavan Krishna Uvacha:-

पावनः पवताम् अस्मि रामः शस्त्रभृताम् अहम्।
झषाणां मकरश्च अस्मि स्रोतसाम् अस्मि जाह्नवी॥

Bhagavadgita - Chapter 10 - Vibhuti Yoga - Sloka 31

pāvanaḥ pavātāmasmi rāmaḥ śāstrabhṛtāmaham.
jhaṣāṇāṃ makaraśca asmi srōtasāmasmi jāhnavī.

Translatiom:-

Of purifiers I am the wind; of the wielders of weapon I am Rama; Of fishes I am the shark, and of the rivers I am Ganges.

All over the world, one will hardly find a river more sacred and more worshiped than Ganges. Described in the Mahâbhârata as the ‘best of rivers, born of all the sacred waters’, the Ganges is personified as the goddess Ganga. Ganga’s mother is Mena and her father is Himavat, the personification of the Himalaya mountains.

Says Sage Vyasa:-

शरीरे जर्झरीभूते व्याधिग्रस्ते कळेबरे।

śarīrē jarjharībhūtē vyādhigrastē kaḷēbarē

auṣadham jāhnavitōyaṃ vaidyōnārāyaṇō hariḥ

śrīdvādaśanāmapañjarastōtram - (2)

Translation:-

“When the sharira (body) is suffering and the body is, or beset with innumerable diseases, the only medicine is like the sacred water of the Ganga and the doctor is Nârâyana Himself” says Sri Krishna Dvaipâyana.

This has deeper meanings. The interesting word here is also “harih” - hari means some one who destroys. In this case it would mean that Nârâyana is destroying disease.

Also, the word “shareera” comes from “sheeryate iti shareeram” - which means it is bound to be destroyed. This is implicitly conveyed in the shloka that even when one takes enough medicine, the body is eventually something that will

decay and get destroyed [2]:-

आलोड्य सर्वशास्त्राणि विचार्य च पुनः पुनः।

इदमेकं सुनिष्पन्नं ध्येयो नारायणो हरिः॥

ālōḍya sravaśāstrāṇi vicārya ca punaḥ punaḥ

idamēkaṃ suniṣpannaṃ dhyēyō nārāyaṇō hariḥ

śrīdvādaśanāmapañjarastōtram - (3)

Translation:-

This is his considered opinion, after analysing the import of all Vedas and other Shastras, not once but repeatedly. The name “Hari” appended to the word “Nârâyana” in the sloka is significant- it means “destroyer” “Harim harantam” says the Taittiriya Aranyaka too. Hari destroys disease (Fig. No.2)[4].

Figure 2 - Lord Dhanvantari:-**Findings in science on Ganges's water:-**

The waters of Ganga (referred to as Ganga jal) is believed to be self cleansing in nature and it is said that a single dip in the waters of this holy river will wash away all the sins of a person! The last rites of the thousands of Hindus are performed at the numerous ghats along the shores of Ganga at the holy sites like Kashi, Varanasi etc. Thousands of human bodies are consigned to this holy river. Millions of Hindus take bath in the waters of this river day in and out and millions more in a single day during festival seasons throughout the year. And yet there is no sign of contagious diseases spreading from person to person due to contact through this river water! Nor is there any sign of things like skin disorders etc. after bathing in this river!

While its purifying properties have been considered by many to be nothing more than a myth, scientists at IMTECH (Institute of Microbial Technology) in

Chandigarh have now proved that there is a scientific reason for the “powers” of the river Ganga.

In 1896, E. Hanbury Hankin (a British physician) after testing the water of Ganga wrote in a paper Ganga Jal – The Holy water of Ganga Antibacterial Nature of Ganges Water published in the French journal Annales de Institut Pasteur, The bacterium Vibrio Cholerae which causes the deadly Cholera disease, when put into the waters of Ganga died within three hours! The same bacteria continued to thrive in distilled water even after 48 hours! [5].

How river ganga cleans the dead bodies:-

In 1927, Flix d Herelle , a French microbiologist, was amazed when he saw that only a few feet below the bodies of persons floating in the Ganga who had died of dysentery and cholera, where one would expect millions of germs, there were no germs at all!

In other words, Hindus had for thousands of years rightly believed that Ganga purifies the dead bodies, which is why probably the bodies of even those who died of infectious diseases were offered to this river for purification! [6]

Feb 17, 2014

Indians have always claimed it prevents diseases, but are the claims wives’ tales or do they have scientific substance? In the fourth instalment of a six-part series, independent producer Julian Crandall Hollick searched for the “mysterious X factor” that gives Ganges water its mythical reputation that Indians refer to as a “disinfectant,” acts on organic materials and bacteria and kills them. Bhārgava says that the Ganges’ self-purifying quality leads to oxygen levels 25 times higher than any other river in the world [7].

Nov 16, 2015

Does water from the River Ganga or “Gaṅgājal” have special self-cleansing properties that kill its high bacterial content?

Past studies from the National Environmental Engineering Research Institute (NEERI), Nagpur and Indian Institute of Technology, Kanpur have indicated that water in the Ganga carries a special load of killer viruses that attack bacteria and knock them out.

Soumya swaminathan, Director General, Indian Council of Medical Research (ICMR) in New Delhi said, "There is a high concentration of bacterio-phages, these are viruses that infect bacteria and this may account for the purifying properties of Ganga water. It is the self-purification property." ICMR is proposing a large study, she added [8].

The scientific fraternity now hopes that their study will eventually benefit humans as the world runs out of new antibiotics.

Jun 12, 2016

Bacteriophages may explain Ganga's healing abilities:-

A multi-lab effort by the National Environmental Engineering Research Institute, the Central Institute of Medicinal and Aromatic Plants, Lucknow and the Institute of Microbial Technology (IMTech, Chandigarh) is studying the possible medicinal properties of the waters of the Ganga. Director-General of the Council for Scientific and Industrial Research the apex body for all the labs Dr. Girish Sahni said: "What is observed is that water samples closer to the source (Gangotri) do not putrefy." He added that a part of the study is to understand why, and investigate the ecosystem of microbes and bacterial life in the river [9].

One hypothesis is that the waters of the river contain bacteriophages viruses that replicate within bacteria and are toxic to them. The IMTech would study these phages for their antimicrobial properties and look at whether these could be translated into effective drugs in future.

Conclusions:-

i. Mysterious Power of Ganga Water [10]

There are two major factors which give Ganges its unique ability. i) The presence of Bacteriophages which gives it the anti-bacterial nature ii) An **unknown** factor called the 'Mystery Factor' which gives this river an unusual ability to retain dissolved oxygen from the atmosphere!

ii. Bacteriophage in Ganga Water

Bacteriophage are those viruses which kill bacteria. What a cat is to a mouse, the bacteriophage is to a bacterium. In other words, the water of river Ganga can be an alternative for using antibiotics to treat bacterial diseases! Ancient Indians who used the water of rivers like Ganga never required any antibiotics, for the very water they used was anti-bacterial in nature!

iii. Ganga - Cauvery link

Dr. K. L. Rao proposed Ganga - Cauvery link in 1972. The Indian Rivers Inter-link proposed by him is a large-scale civil engineering project that aims to link Indian rivers by a network of reservoirs and canals and so reduce persistent floods in some parts and water shortages in other parts of India. The environmental, political and the economical aspects of the topic have provided us with the importance of water conservation [11].

Therefore, today we are water stressed, but tomorrow we will be water scarce. It is high time, since Dr. Rao proposed the Ganga – Cauvery Link some five decades ago, that the Central and State Governments initiate and implement the scheme in right earnest. It helps the country i) improve agriculture and self sufficient on the food front, ii) provide inland waterways and merchandise iii) overcome water scarcity, and above all helps one and all in the country to reap the spiritual benefits of the waters of this sacred river Ganges interlinked with other rivers of the country.

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