# STUDY ON LONAR CRATER THE UNIQUE ECOSYSTEM

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**Abstract:**

The Lonar Crater the unique name among the world's largest crater ever and the peculiarity about this world famous Lonar crater are diversified with respect to it's origin and existence of life in and around periphery. The prime Intention of this investigation is to bring attentions of investigators about Lonar crater which is the great "House of Knowledge". It is the only Crater where unique flora and fauna can be observed which is quite similar to inland water body. During this particular investigation recent change of water body in to pink color due to high growth of haloarchae pink color pigmented bacteria and uniqueness about the ecosystem.

**Keywords:**

Unique ecosystem,

Ecology, Haloarchae Bacteria,

"House of Knowledge".

**1 Introduction**

The uniqueness about shape, size of Lonar crater-lake which is a 1.8-km-diameter impact crater in India widely from less than 12 ka to over 600 ka , is a rare example of terrestrial impact craters formed in basaltic bedrock [2]. The estimated age of the crater ranges 47000 to 50000 thousand years and being saline-soda has paid great attention of Biologist [3], geologist, ecologists, archaeologists, naturalists and astronomists, and has been studies on various aspects of crater unique ecosystem. Lonar meteorite Lake appear to be a unique aquatic ecosystem characterized by hyper saline, hyper alkaline also. It is believed that, Lonar Crater Lake had cratered by nature due to meteoritic high velocity impact and is the third largest crater -lake of the world [4] Recently during June 2020 there was sudden change in water color of Lonar Crater was observed and preliminary investigations were done [5][9].

**2. Literature Review**

The colour of Lonar lake water in Maharashtra's Buldhana district turned pink due to a large presence of the salt-loving 'Haloarchaea' microbes, a probe carried out by a Pune-based institute has concluded. Haloarchaea or halophilic archaea is a bacteria culture which produces pink pigment and is found in water saturated with salt, Agharkar Research Institute Director told *PTI*.[6]

**3.Material and Methods**

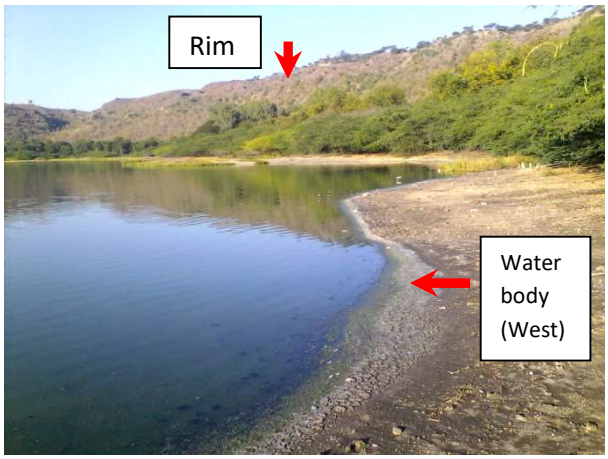
Survey study and field observations were done. NGO's Survey was done.

Data analyses were done for this investigation.

**4.Result and Discussion**

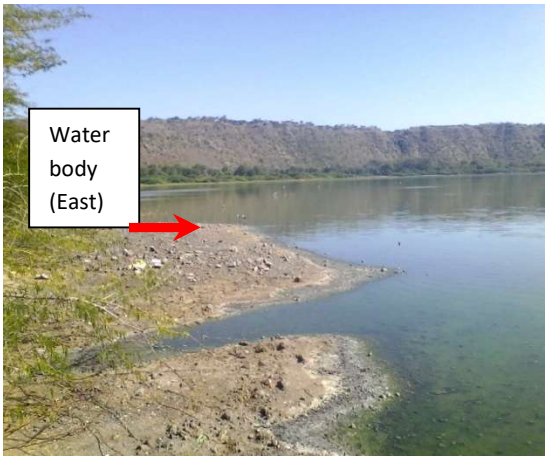
**1a: Geographic** Photo of Lonar Crater M.S. India

19°58N76°31E Source: [1]


**a** **b**

**1b)** Shows water body and green vegetations inside the world famous Lonar Crater M.S. India



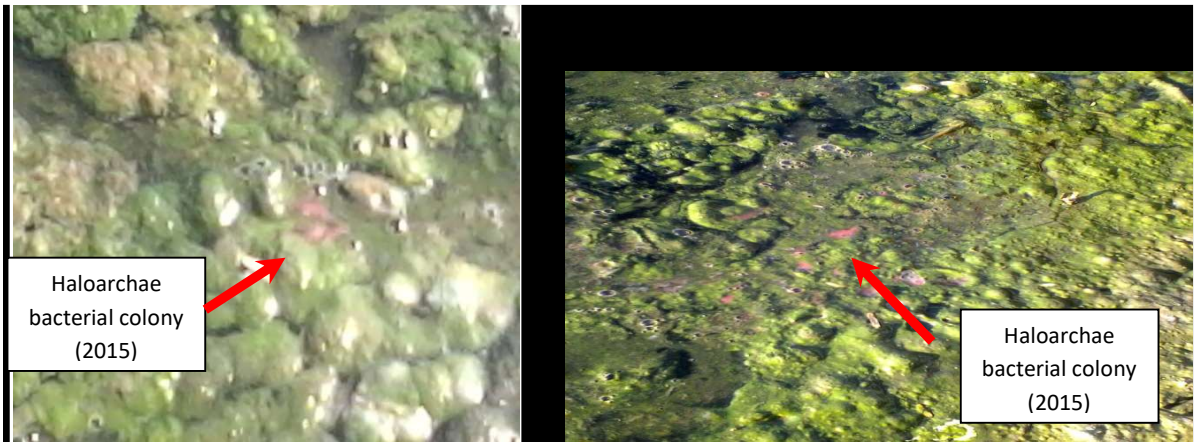


**c** **d**

**1c d)** Shows water body and green vegetations inside the world famous Lonar Crater M.S. India

Photo 2a) Shows water body and green vegetations inside the world famous Lonar Crater M.S. India


Photo 2b) Shows water body and green vegetations inside the world famous Lonar Crater M.S. India




Lonar Crater Lake is a now a day's known as wetland due to it's fluctuation and behavior like wetland appearance. This Crater–lake is of important and rich biodiversity hotspot. It is extremely important for waterfowls, ducks, cranes, and many other migratory birds and microscopic organisms. The previous hydrological study shows changes tending towards vaporization and Eutrophication reducing of flora fauna during their investigations and water parameters [6].Lonar carter is having unique ecosystem which need to bring more attention of visitors, academicians, researchers, scientist and funding agencies for ecological findings present at this part of the world. Bacteria- Halloarchaea, produces a pink pigment, it formed a pink colour mat on the water surface. Scientist have prepared a detailed report of their findings and sent it to the forest department [7]. It is assumed that the absence of rain, less human interference and high temperature resulted in the evaporation of water which increased its salinity and pH. This study also supports that Bacteria- Halloarchaea, produces a pink pigment, it formed a pink colour mat on the water surface of Lonar Crater water body.

During the investigation, they also came across an interesting incidental finding related to flamingos that visit the lake by landing over. The plumage of the bird is pink or reddish in colour because of ingestion of carotenoids rich food by Flemingo**.**

**5.Conclusion:**

Lonar Crater Lake is a now a day's known as wetland due to it's fluctuation and behavior like wetland appearance. This Crater–lake is of important and rich biodiversity hotspot. It is extremely important for waterfowls, ducks, cranes, and many other migratory birds and microscopic organisms. The previous hydrological study shows changes tending towards vaporization and Eutrophication reducing of flora fauna during their investigations and water parameters [8]. Lonar carter is having unique ecosystem which need to bring more attention of visitors, academicians, researchers, scientist and funding agencies for ecological findings present at this part of the world. Bacteria-Halloarchaea, produces a pink pigment, it formed a pink colour mat on the water surface. Dhakephalkar P. et al., (2020) have prepared a detailed report of their findings and sent it to the forest department. It is assumed that the absence of rain, less human interference and high temperature resulted in the evaporation of water which increased its salinity and pH. This study also supports that Bacteria- Halloarchaea, produces a pink pigment, it formed a pink colour mat on the water surface of Lonar Crater water body. It is a massage to researchers that research the hidden knowledge and create knowledge for scientific society and human welfare also.

**Funding:**

No funding is there as such.

**Recommendations:**

For more comprehensive and quality work on Lonar Crater Lake because Our Department is nearer to Lonar Crater Lake just by walking distance**.** Well equipped Research Laboratory sanction is required. We have plan for simulators of Lonar Crater also for more exploration and investigation that the hidden things are still need to be investigate by researchers.

**AKNOWLEDGEMENTS**

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**Conflict of Interest:**

Author has no any conflict of interest regarding all elements and facts in this study.

**References**

[1] Source: Google map

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