

# MARS HAD SALT LAKES SIMILAR TO EARTH: STUDY

Relevant for: Geography | Topic: The Earth and the Solar System

Composite image made from a series of June 15, 2018 photos shows a self-portrait of NASA's Curiosity Mars rover in the Gale Crater. | Photo Credit: [AP](#)

Mars once had salt lakes that went through wet and dry phases similar to those on Earth, according to a study published in the journal *Nature Geoscience*.

This indicates that the red planet's climate 'dried out' a long time. According to the researchers, over 3 billion years ago, the lake that was present in Gale Crater — a rocky basin that is being explored with NASA's Curiosity rover since 2012 — underwent a drying episode possibly linked to the global drying of Mars.

According to the researchers, including those from Texas A&M University in the U.S., liquid water on Mars may have become unsustainable and evaporated as the planet's atmosphere and the pressure of the surface became thinner. surface on the surface

The study, published in the journal *Nature Geoscience*, noted that over 3 billion years ago the lake that was present in Gale Crater — an immense 95-mile-wide rocky basin that is being explored with the NASA Curiosity rover since 2012 — underwent a drying episode possibly linked to the global drying of Mars.

The Gale Crater formed about 3.6 billion years ago when a meteor hit Mars, the study noted.

"Since then, its geological terrains have recorded the history of Mars, and studies have shown Gale Crater reveals signs that liquid water was present over its history, which is a key ingredient of microbial life as we know it," said co-author of the study Marion Nachon from Texas A&M University.

According to Ms. Nachon, the salt ponds eventually formed during these drying periods. "It is difficult to say exactly how large these ponds were, but the lake in Gale Crater was present for long periods of time - from at least hundreds of years to perhaps tens of thousands of years," Mr. Nachon said.

The researchers said that the salt ponds on Mars are similar to some found on the Earth such as those in a region called Altiplano near the Bolivia-Peru border.

Ms. Nachon added that the Altiplano is an arid, high-altitude plateau where rivers and streams from mountain ranges "do not flow to the sea but lead to closed basins, similar to what used to happen at Gale Crater on Mars".

"This hydrology creates lakes with water levels heavily influenced by climate. During the arid periods Altiplano lakes become shallow due to evaporation, and some even dry up entirely," she said.

According to the researchers, the climate on Mars may have similarly fluctuated between wetter and drier periods.

The study also noted the types of chemical elements present in the liquid water that was present at the red planet's surface at the time, and the type of environmental changes any potential life

forms on Mars may have had to cope with, had they existed.

You have reached your limit for free articles this month.

Register to The Hindu for free and get unlimited access for 30 days.

Already have an account ? [Sign in](#)

Sign up for a 30-day free trial. [Sign Up](#)

Find mobile-friendly version of articles from the day's newspaper in one easy-to-read list.

Enjoy reading our articles without intrusion from advertisements.

A select list of articles that match your interests and tastes.

Move smoothly between articles as our pages load instantly.

A one-stop-shop for seeing the latest updates, and managing your preferences.

We brief you on the latest and most important developments, three times a day.

\*Our Digital Subscription plans do not currently include the e-paper ,crossword, iPhone, iPad mobile applications and print. Our plans enhance your reading experience.

*Support quality journalism - [Subscribe to The Hindu Digital](#)*

Please enter a valid email address.

The 2019 Nobel Prize for Chemistry was awarded to John B. Goodenough, M. Stanley Whittingham and Akira Yoshino for working towards the development of practical lithium-ion batteries.

Subscribe to The Hindu now and get unlimited access.

Already have an account? [Sign In](#)

Sign up for a 30-day free trial. [Sign Up](#)

Support The Hindu's new online experience with zero ads.

Already a user? [Sign In](#)

**END**

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com