

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
Water from Space: Societal, Educational and Cultural Aspects (6.-E5.4)

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LOOKING FOR MARS IN THE NORTHERN ATLANTIC

**Abstract**

In May of 2010, an expedition including scientists and artists will layer the topographies and climates of seemingly disparate planetary bodies, drawing on life on Mars to extrapolate the future of planet Earth. Likewise, pondering the oceanic future could illuminate past life on Mars.

Organisms that may once have lived on Mars could develop in currently acidifying oceans. The melting of icecaps will alter the salinity and temperature of the subpolar seas bordering the Northern Atlantic and drastically affect currents and climate. The area of the expedition's research surrounds Island Roy, Ireland's red island.

The League of Imaginary Scientists, the group undergoing the expedition under the umbrella of a Lovely Weather Residency in Ireland, has facilitated the naming of an aerographic feature on Mars after an Irish island. The nomination of local site names was coordinated through Donegal County's Regional Cultural Centre in Letterkenny, a producer along with Leonardo/OLATS of Lovely Weather. The naming of Mars after a location in Ireland effectually creates a sister site between the planets. With the consideration of where the Mars naming site might be, the social imagination of life on Mars connects the planets, bringing Mars to Earth by permitting locals to consider the broad and small connections between the distant places.

Island Roy on Mars was found by the Mars Rover, Opportunity. The Mars Rover project has identified mineral deposits on Mars that were formed by liquid. The presence of these minerals indicate that there was water on Mars. The rover has also detected seasonal morning frost and ice that moves directly from the solid to gas state. It is theorized that the northern hemisphere of Mars was an ocean, as its surface is smooth and dramatically lower than the elevation of the Southern hemisphere. This topography mirrors the smooth sea floors of oceans on Earth.

There are parallels between the postulated oceans of Mars past and the predicted future of Earth oceans, which contain dissolved CO<sub>2</sub>. Increases in atmospheric levels of CO<sub>2</sub> cause ocean acidification, where a rise in carbonic acid shifts the ocean's surface pH and reduces the ocean's habitability. Considering Mars a possible future version of Earth is akin to climate time travel. The expedition compares the timeline of the local oceanic climate with the posited paleoaerography of Mars. In examining these distinct planetary climates, The League of Imaginary Scientists considers whether living on Mars is truly in Earth's future.