

Vikings used glowing 'sunstone' to navigate on cloudy days

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London, Jan 31 (ANI): The 'magical'

stories about the glowing 'sunstone' that, when held up to the sky, revealed the position of the Sun even on a cloudy day, may all be true.

Scientists measuring the properties of light in the sky have said that polarizing crystals-which function in the same way as the mythical sunstone-could have helped ancient sailors to cross the northern Atlantic, reports Nature.

The Vikings, seafarers from Scandinavia around 750 to 1050 AD were skilled navigators their legends hint that these sailors had a navigational aid at their disposal- solarsteinn, or sunstone.

Gabor Horvath, an optics researcher at Eotvos University in Budapest, and Susanne Akesson, a migration ecologist from Lund University, Sweden, have been studying various assumptions since 2005.

In one study, the researchers took photographs of partly cloudy or twilight skies in northern Finland through a 180-degree fisheye lens, and asked test subjects to estimate the position of the Sun⁴. Errors of up to 99 degree led the researchers to conclude that the Vikings could not have relied on naked-eye guesses of the Sun's position.

To check whether sunstones would work better, in 2005 they measured the polarization pattern of the entire sky under a range of weather conditions during a crossing of the Arctic Ocean on the Swedish icebreaker Oden^{5, 6}.

The researchers were surprised to find that in foggy or totally overcast conditions the pattern of light polarization was similar to that of clear skies. The polarization was not as strong, but Akesson believes that it could still have provided Viking navigators with useful information.

"I tried such a crystal on a rainy overcast day in Sweden. The light pattern varied depending on the orientation of the stone," she said.

The findings were published in the journal Philosophical Transactions of the Royal Society B. (ANI)

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