

Witness the birth of Africa's new ocean

June 28 2010



(PhysOrg.com) -- Scientists at the University of Leeds are predicting that within 10 million years Africa's Horn will fall away and a new ocean will form.

The team, who aim to show that geology can be fast and furious, will present their research at this year's Royal Society Summer Science Exhibition which opens in London today. Visitors to the exhibit will be able to take a 3D tour of the Afar rift in Ethiopia - above and below ground - where the [African continent](#) is cracking open.

In the remote Afar desert a 60 kilometre - around 40 miles - long segment of [plate boundary](#) cracked open by as much as eight metres over ten days in 2005. The gap filled with 2.5 cubic kilometres of [molten rock](#) - enough to bury the 42 square kilometres of London's congestion charging zone under 60 m of [lava](#).

Since then the crack has been growing wider and longer with the latest eruptions taking place as recently as May 2010. The scientists studying

the region believe that a new ocean is slowly forming and will eventually split the African continent in two.

Visitors to the "Fast and furious: witnessing the birth of Africa's new ocean" exhibit will be able to see a 3D interactive movie of the Afar region, examining how the surface geology changes when the land splits apart. At the seismometer stand visitors will have the opportunity to jump up and down to create their own earthquakes as well as learn how scientists use earthquakes to figure out the earth's processes.

Dr Tim Wright of the University of Leeds School of Earth and Environment said: "The process of ocean formation is normally hidden deep beneath the seas, but in Afar we have are able to walk across the region as the Earth's surface splits apart - it really is amazing.

"We now have the opportunity to conduct all sorts of experiments in this unique natural laboratory, to further understand the processes involved in shaping the surface of the Earth. It helping us to understand and mitigate natural hazards like earthquakes and volcanic eruptions."

"The activity in the last 5 years in Afar has been truly incredible - we have been witnessing the plates split apart in real time in front of our eyes. Our research has shown the importance of molten magma in the whole process - we have been able to track the magma from below the Earth's crust until it is intruded into cracks and solidifies into new crust, or is erupted at the surface."

The Royal Society's Summer Science Exhibition is at the heart of See Further: The Festival of Science + Arts at Southbank Centre which celebrates the 350th anniversary of the Royal Society.

Provided by University of Leeds

Citation: Witness the birth of Africa's new ocean (2010, June 28) retrieved 26 April 2024 from <https://phys.org/news/2010-06-witness-birth-africas-ocean.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.