

# Rift Will Split Africa to Create New Ocean

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In 2005, a gigantic rift broke open desert ground in Ethiopia in 2005, and since then scientists have speculated that it was the first step in a process that will eventually split eastern Ethiopia and Somalia from the African continent by a new Ocean. Four years later, researchers have proof that this will indeed happen.

When the rift was created in 2005, it almost went unnoticed because of the sparse population of the Ethiopian desert. At 34.8 miles large, or 56 kilometers, it sounds impossible that it couldn't be noticed. Indeed, it was noticed. Satellite imagery clearly showed that the landscape had changed. At the time, geologists believed that the rift was the start of a new ocean as two parts of the African continent pulled apart. This claim was controversial at the time, however.

Scientists from several countries now confirm that the volcanic activity at work beneath the Ethiopian rift are identical to those at the bottom of the world's oceans. And they say that the rift is likely the beginning of a new sea.

Scientists suggest that instead of breaking apart little by little has been popularly and predominantly believed, the highly active volcanic boundaries along the edges of tectonic ocean plates may suddenly break in large sections. Cindy Ebinger, a professor at the University of Rochester and co-author of the study, said that sudden large-scale events like this on land would pose a much more serious hazard to populations living near the rift than smaller events.

The study was published in the latest issue of "Geophysical Research Letters." Ebinger also notes that:

"The whole point of this study is to learn whether what is happening in Ethiopia is like what is happening at the bottom of the ocean where it's almost impossible for us to go. We knew that if we could establish that, then Ethiopia would essentially be a unique and superb ocean-ridge laboratory for us. Because of the unprecedented cross-border collaboration behind this research, we now know that the answer is yes, it is analogous."

Leading the investigation was Atalay Ayele, a professor at the Addis Ababa University in Ethiopia. He gathered seismic data surrounding the 2005 event which led to the giant rift opening more than 30 kilometers (18.6 miles) in width in just a matter of days. He also combined data from the neighboring Eritrea with the help of Ghebrebrhan Ogubazghi, a professor at the Eritrea Institute of Technology, and Jama Sholan of the National Yemen Seismological Observatory Centre.

Ayele drew a map of when and where earthquakes happened in the region, which fit very well with the detailed analyses that Ebinger had conducted in recent years. His reconstruction of events also showed that the rift did not open in a series of small earthquakes over an extended period of time, rather, it tore along its entire length in just days.

A volcano called Dabbahu at the north end of the rift erupted first. Magma pushed up through the middle of the rift area and began to "unzip" the rift in both directions.

Ebinger and her colleagues have installed seismometers and measured 12 similar (although less intense) events since 2005.

Ebinger noted:

“ like once at open break could ridge the of length huge that knew never we but rift, into magma intrusion similar by created are ridges seafloor know”

Ayele and his colleagues continue to monitor the area to learn more about how the magma system beneath the rift in Ethiopia evolves as it continues to grow.

None of the researchers expects that they will observe the separation of Ethiopia in their lifetimes. New seafloor creation happens over the course of millions of years, but they believe that one day Ethiopia and even parts of Kenya might one day become an island continent of its own.