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## **WHAT CAUSES EARTHQUAKES? ELEPHANTS OR TURTLES OR COBRAS OR FLEAS**

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Elephants, turtles, cobras, fleas and devils have been presented as the cause of earthquakes in earthquake legends in some cultures around the world. I will sample some of these legends. An Indian legend says that the Earth is held up by four elephants that stand on the back of a turtle. The turtle is balanced on top of a cobra. When any of these animals move, the Earth trembles and shakes. A Siberian legend: the Earth rests on a sled driven by a god named Tuli. The dogs that pull the sled have fleas. When they scratch their bodies, the Earth shakes. According to Mexican legend, El Diablo, the devil, makes giant rips in the Earth from the inside. He and his devilish friends use the cracks when they want to come and stir up trouble on Earth. The reader knows that the causes of earthquakes are much more complex. This article will touch also on scientific and Islamic perspective.



SOURCE: ISTOCKPHOTO.COM

Living an earthquake is, at least, traumatic. I will share with you a part of an e mail received from a mother who lived the Haiti earthquake: I was in the kitchen, my son Grayden was in his room. Bridgely was in the house but close to the door. We think one of the twins was in her bedroom and one was on the porch. Teagan and Laurens were on the porch. It started as a low hum and shake, and then it grew.... My mind thought,



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"That is strange", then my mind thought, "what is that?" In a matter of seconds the house came alive and I was at the end of my kitchen table. The shaking was incredible. I remember seeing the concrete walls moving violently in a wave like at a wave pool. One to my right, one to my left and then one in front of me moving in a different direction. I also remember the ceiling was moving in a wave above me. The floor beneath my feet did not feel attached to me.

Grayden ran to me screaming. Hysterical screams and I clung him tight to me and instinctively semi crouched. All of this may have only taken a few seconds. I don't know. The next thing I remember was Laurens running in the house yelling "get out, get out, and get out...RUN" As he grabbed my arm, I went into full action. Still clinging to Grayden, I ran to the door grabbing as many of my children as I could. Yelling myself, "RUN, RUN, RUN, GO, And GO". We reached the steps to the garden and I remember how difficult it was to run down them as the concrete steps were moving. I remember running through the front drive with the land still moving. Laurens was still yelling to run further to get away from the building. The dog followed us all. When I got to the end of the driveway, I looked around and counted kids, I could not see Bridgely. I turned back to the building and screamed "BRIDGELY, BRIDGELY, BRIDGELY" as I thought he was still on the upper level at our neighbors. Then there he was in front of me. He had been holding my hand the whole time. Some where between the driveway and the road, the movement stopped. For a moment..... Then it started again, smaller but almost as big as the first and long as well. I gathered the kids and instructed them to sit and we huddled until it stopped. Then it started again.....Finally the earth rested for a while.



In spite of the great devastation caused, the Haiti earthquake is not listed in the 10 largest earthquakes. Please examine the Table.



### The Ten Largest Earthquakes Since 1900

	Location	Date	Magnitude
1.	Chile	May 22, 1960	9.5
2.	Prince William Sound, Alaska	March 28, 1964	9.2
3.	Andreanof Islands, Aleutian Islands	March 9, 1957	9.1
4.	Kamchatka	Nov. 4, 1952	9.0
5.	Off western coast of Sumatra, Indonesia	Dec. 26, 2004	9.0
6.	Off the coast of Ecuador	Jan. 31, 1906	8.8
7.	Rat Islands, Aleutian Islands	Feb. 4, 1965	8.7
8.	Northern Sumatra, Indonesia	March 28, 2005	8.7
9.	India-China border	Aug. 15, 1950	8.6
10.	Kamchatka	Feb. 3, 1923	8.5

Earthquakes are not caused by elephants, turtles, cobras or devils but by what science call “plate tectonics”; “According to the plate tectonic model, the surface of the Earth consists of a series of relatively thin, but rigid, plates which are in constant motion. The surface layer of each plate is composed of oceanic crust, continental crust or a combination of both. The lower part consists of the rigid upper layer of the Earth's mantle. The rigid plates pass gradually downwards into the plastic (soft) layer of the mantle, the asthenosphere. The plates may be up to 70 km thick if composed of oceanic crust or 150 km incorporating continental crust. Plates move at different velocities, The African plate moves about 25 mm per year, whereas the Australian plate moves about 60 mm per year”. The plates move because of at least three possible reasons: convection currents, magma injection and descending plates.

([www.hartrao.ac.za/geodesy/tectonics.html](http://www.hartrao.ac.za/geodesy/tectonics.html)).

Muslims ponder upon earthquakes of known magnitudes to imagine what will happen to them during THE EARTHQUAKE OF THE HOUR - the EARTHQUAKE of unknown magnitude: [(When the earth is shaken to her (utmost) convulsion 1), (And the earth



Throws up her burdens (from within) 2), (And man cries (distressed): 'What is the matter with her?'-3), (On that Day will she declare her tidings: 4), (For that thy Lord will have given her inspiration. 5)]. Some scenes of THE EARTHQUAKE are described in (Quran 22: 1-2) (Y. Ali) [O mankind! Fear your Lord! For the convulsion of the Hour (of Judgment) will be a thing terrible! (Y. Ali) (The Day ye shall see it, every mother giving suck shall forget her suckling- babe, and every pregnant female shall drop her load (unformed): thou shalt see mankind as in a drunken riot, yet not drunk: but dreadful will be the Wrath of Allah. In a way, earthquakes call mankind to fear Allah and have “taqwah”. To summarize it, “taqwah” means that Allah does not see you where he forbade you and does not lose sight of you where He ordered you.

This article covered in general terms the causes of earthquakes from the cultural, scientific and Islamic viewpoints. Our responsibility is to study the Earth and the Heavens (Quran 10:101) and try to understand the laws used in running the universe in order to develop a positive relationship with the world around us, including the earth and its behavior.