



My Drift

Title: Pacific Ring of Fire

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Date: 21 May 2018

Article Number: 289-2018-13



The countries in The Pacific Ring of Fire include:

Argentina • Belize • Bolivia • Brazil • Brunei • Canada • Colombia • Chile • Costa Rica • Ecuador • East Timor • El Salvador • Micronesia • Fiji • Guatemala • Honduras • Indonesia • Japan • Malaysia • Mexico • New Zealand • Nicaragua • Palau • Papua New Guinea • Panama • Peru • Philippines • Russia • Samoa • Singapore • Solomon Islands • Tonga • United States

Pacific Ocean Trenches and Plates

The Ring of Fire is a 25,000-mile horseshoe shaped basin of the Pacific Ocean where most of the world's earthquakes and volcanic eruptions occur. It is associated with a nearly continuous series of oceanic trenches, volcanic arcs, and volcanic belts and plate movements. The tectonic plates are constantly sliding past, colliding into, or moving above or below each other. This movement results in deep ocean trenches, volcanic eruptions, and earthquake epicenters along the boundaries where the plates meet, called fault lines. The Ring of Fire is home to the deepest ocean trench, called the Mariana Trench. Located east of Guam, the 7-mile-deep Mariana Trench formed when one tectonic place was pushed under another.

The Pacific plate (picture below), on which the Ring of Fire lies, is the largest Tectonic plate of the Earth. The plate spreads over an area of about 40 million square miles (103 million square kilometers).



Pacific Plate

Guess what state and what volcano is right dab in the middle of the Ring of Fire? I circled it in the picture above just in case you could not figure it out. Yes, it is no coincidence that I'm writing this article now (in May 2018) during a major eruption of the Kilauea Volcano on the Big Island of Hawaii. More about this specific disaster later in the article.

Volcanoes and Earthquakes in The Ring of Fire

It has 452 volcanoes (more than 75% of the world's active and dormant volcanoes). About 90% of the world's earthquakes occur along the Ring of Fire. All but three of the world's 25 all-time largest volcanic eruptions occurred at volcanoes in the Ring of Fire.

Some of the world's most active volcanoes are found here. Kilauea in Hawaii which is considered the most active volcano in the world, is in the Pacific Ring of Fire. Other volcanoes worth noting are Mount Fuji in Japan, Mount Saint Helens and Mount Rainier in the US Pacific northwest, Krakatoa in Indonesia, Mauna Loa in Hawaii, Galeras in Colombia, and Sangay in Ecuador. Those are all volcanoes that are well known and some that could be very dangerous to the population nearby.



Kilauea has been continuously erupting since 1983 but the current eruption activity may be the worst in its history



Mauna Loa on the Big Island of Hawaii is the largest active volcano in the world - It last erupted in 1984



Mount Rainier is a very dangerous volcano. It is the highest mountain (14,411 feet) in the state of Washington. It last erupted in 1894-95.



In May 1980, Mount St. Helens became the largest and most destructive volcanic eruption in U.S. history. It killed 57 people.



Sangay is an active stratovolcano in central Ecuador. The last eruption started in 1934 and is still ongoing.



Galeras is a volcano with a violent eruptive history. It is near the 500,000 people of Pasto, Colombia. Its last eruption was 2012 to 2014.



Japan's Mount Fuji is an active volcano about 63 miles southwest of Tokyo. It last erupted in 1707-1708.



The eruption of the Krakatoa volcano (in Indonesia) in 1883 was one of the most deadly in history. Its last eruption was in Feb 2017.

Most Dangerous Volcanoes

Because of all the activity in the Pacific Ring of Fire, it is very possible that one of those volcanoes could cause a lot of trouble for a lot of people. If Mount Rainier were to erupt for example, the 4 million people in the area near Seattle and Tacoma would have to evacuate fast. Adding to the danger is the snowy cap of the volcano which could make the dangers much worse.

The Santa Maria Volcano in Guatemala has already shown its power with one of the most catastrophic eruptions in the 20th century taking place in 1902. Back then the volcano affected a very large part of the south west of the country; today with many more people in the area the impact of this volcano in the Pacific Ring of Fire could be much greater.

Mount Yasur in Vanuatu is what's called a stratovolcano and it has been erupting for close to a hundred years. The dangers that Mount Yasur presents are real, and yet tourists risk the dangers of toxic gases and lava flows by getting to the crater every day. This volcano has already taking a few lives from tourists and a tour guide who got too close to the danger zone.

Constant Changes

The Pacific Ring of Fire is different today than it was thousands of years ago because of the changes caused by tectonic plates. The Pacific Plate will hit other plates nearby and that causes them to sink. The crust melts producing the magma that feeds the different volcanoes in the Pacific Ring of Fire or it will help produce new volcanoes. The tectonic plates are also the reason for the many violent earthquakes in the entire area of the Pacific.

Risks

If you are in a city that is located in the Pacific Ring of Fire, then you already know that there are several risk factors that you have to be ready for. Close to 90 percent of the earthquakes reported around the world take place in the Ring of Fire. Add to that the possibility of volcano eruptions and that can really be a dangerous area to live in. People not only have to look at the active volcanoes as the dormant ones also pose a threat. Mt. Saint Helens was a dormant volcano before its eruption in 1980 which caused several deaths and over a billion dollars in damage.

Major Earthquakes

These are the largest or most notable earthquakes per year since the start of the 21st century.

Year	Magnitude	Death toll	Location / Name	Date
2017	8.2	98	Mexico	September 8
2016	7.8	676	Ecuador	April 16
2015	8.3	14	Chile	September 16
2014	8.2	6	Chile	April 1
2013	8.3	0	Russia	May 24
2012	8.6	10	Indonesia, Indian Ocean	April 11
2011	9.1	20,896	Japan	March 11
2010	8.8	525	Chile	February 27
2009	8.1	192	Samoa	September 29
2008	7.9	87,587	China	May 12
2007	8.5	23	Indonesia	September 12
2006	8.3	0	Russia	November 15
2005	8.6	1,300	Indonesia	March 28
2004	9.2	250,000	Indonesia, Indian Ocean	December 26
2003	8.3	0	Japan	September 25
2002	7.9	0	United States (Alaska)	November 3
2001	8.4	100	Peru	June 23

All of these earthquakes were in the Pacific Ring of Fire except the one in China. The one we all remember the best was probably the 2011 Tōhoku earthquake and tsunami in Japan.



The 2011 Japan earthquake off the Pacific coast of Tōhoku was a magnitude 9.1 undersea megathrust earthquake. It was the most powerful earthquake ever recorded in Japan and the fourth most powerful earthquake in the world since modern record-keeping began in 1900. The earthquake triggered powerful tsunami waves that reached heights of up to 40.5 meters (133 feet) in the Miyako and Sendai areas – these waves traveled up to 10 km (6 miles) inland. The earthquake moved Honshu (the main island of Japan) 2.4 meters (8 feet) east, shifted the Earth on its axis by estimates of between 10 cm (4 inches).

How many people live on or in the Ring of Fire?

I'm sorry to say that I could not find an exact reference to answer this question. But, this doesn't stop me from coming up with my own estimate. National Geographic states that approximately 44 percent of the world's population lives in coastal regions. The Pacific Ring of Fire has coastline along Asia, all of western North and South America and in Oceania. This sheer volume of coastal land, combined with the long history of people in Asia, means that there are a lot of people living on or in the Pacific Ring of Fire.

My estimate: The current world population is 7.6 billion as of May 2018. 44% of that equals 3.344 billion people living in coastal regions. Since the Pacific Ocean is by far the biggest body of water on earth, more than half of these people must live on or in the Pacific Ring of Fire. So, my rough estimate is 1.8 billion people. By the way, this estimate includes everybody living in Hawaii.

Why are people so dumb that they live on or near an active volcano?

The following article written by Lee Cataluna and published on May 9, 2018 in the Honolulu Star Advertiser newspaper explains it better than I can.

*The first question might be the worst
By Lee Cataluna*

Why live on an active volcano?

So many news outlets have posed this question. Some people have been popping off on social media, in the terrible way some people do, victim-blaming and head--shaking after a terrible thing happens to somebody else. The question is not always laden with arrogance and malice, though. Some people just are genuinely confused or curious. Why live in a place where lava might come and take your home?

It's a fruitless game to play at this point. The salient question is - What kind of help do they need to rebuild their lives?

The game is also endless. There is no winner, no perfect place on which to stake your claim and build your home.

Why live along a river? Aren't you afraid of floods?

Why live in a beachfront home? Aren't you afraid of tsunamis?

Why live along the ridge of a mountain? Aren't you afraid of landslides?

Why live at the bottom of a mountain? Aren't you afraid of rockfalls?

Why live in a high-rise? Aren't you afraid of fires?

Why live in a walk-up? Don't you worry about bad people coming right to your door?

Why live in Hawaii at all? Aren't you afraid of ... fill in the blank. Hurricanes, sharks, barge strikes, North Korean missiles.

People in Hawaii have their questions, too.

Why live where it's cold? Isn't it ... cold?

Why live in cities where the crime rate is high?

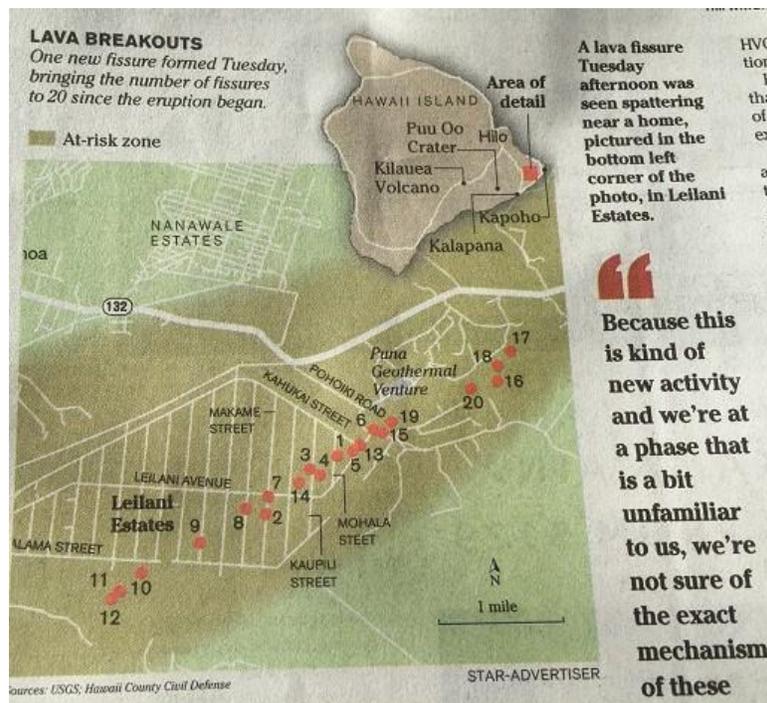
Why live where the only thing you have to keep yourself occupied is to write ignorant comments online about people you've never met and don't understand?

When unforeseen circumstances fall into other people's lives, human nature being what it is, people want to convince themselves that the specific misfortune wouldn't happen to them. Oh, they'd never live in a place like that. They'd never take those kind of risks. They'd never put themselves in harm's way. These are attempts to maintain a sense of security and the false idea that the world is safe if only you play by the rules.

It also bears pointing out that this was not predictable or inevitable. No one anticipated that lava from Puu Oo would travel underground and push up to the surface 15 miles away. People did not knowingly put themselves in harm's way.

The "why" question is often answered with the statement that people live in places like Leilani Estates because that's where they can afford real estate in Hawaii. But it's not that they have no choice, but because they make the choice, and they chose to live in a place that is quiet but never silent because of the pulse of the land; a place where the "living earth" is not just a concept, but a constant presence; where they can have a large yard and chickens and rain-watered orchids and cats sleeping on the porch; where they can park a truck on the grass and hang clothes on the line; where nobody bothers them and they can see all the stars at night. Everywhere there are risks. This is a place of immense richness!

More info about Leilani Estates and the current eruption



As of Tuesday, May 15, 2018, there were 20 fissures (cracks in the earth spilling out hot lava and poisonous gases) in the quiet town of Leilani Estates. There were about 2,000 people and 700 homes in this subdivision before the volcano erupted. Lava erupting from Hawaii's powerful Kilauea

volcano has now destroyed at least 36 structures including 27 homes. Scientists reported lava spewing more than 200 feet into the air.



Officials warned residents and airplanes to stay away from part of Hawaii's Big Island after a plume of ash from the Kilauea volcano rose 30,000 feet into the air. The US Geological Survey issued a red alert Tuesday, which means a major eruption is imminent or underway and ash could affect air traffic. USGS officials have said a phreatic eruption could happen at a crater at the top of the Kilauea volcano. It could send ash plumes as far as 30 miles from the summit crater. This ash could possibly reach Hilo the largest city on the Big Island of Hawaii.

Besides the ash, residents and visitors have to worry about choking on noxious sulfur dioxide gas coming out of all those fissures in the ground along with the very hot lava. The air is very bad near the volcano but everybody in Hawaii has to worry about the vog when the winds change to come from the south (called Kona Winds).

More than 500 earthquakes have occurred after the mag 6.9 on the South Island of Hawaii and the tremors are increasing at an alarming level. Scientists forecast more eruptions and more earthquakes, perhaps for months to come.



Lava covers land and roads in Leilani Estates



Leilani Estates Subdivision

More than 2,000 people have evacuated, and some said they may have to stay away from their homes for a long time. Some have no home or property to go back to.

The initial eruptions in Leilani Estates are about 15 miles from the Pu'u O'o crater, a primary vent of Kilauea, and about 25 miles from the peak of the actual Kilauea volcano. As the surface of the lava lake at the summit has receded, it has forced molten rock underground to travel through conduits and erupt miles away.

As you can see, things are not good on the Big Island of Hawaii.

How much does a house cost in Leilani Estates?

I'm pretty sure you can find a place there now that is very cheap! But even before the lava come, the price of a home there was very reasonable by Hawaii standards. The average price of a home on Oahu is approaching \$900K. That includes a 3-bedroom single wall constructed house with a small lot. On the Big Island of Hawaii in the Leilani Estates, the average price of a fee simple house is under \$300K. For example, you can buy a 3-bedroom, 3-bath, 2,787 square feet of living space, and 2 acres of land for \$350,000. In fact, I saw this house on the Internet and it is currently for sale.



Leilani Estates Home

More info about the house: As you enter the house through the front lanai your eyes will be directed to the sunlight filled cathedral ceiling. The living room has sweeping views of the surrounding forest and ocean beyond and is accented with a tiled fireplace. Spectacular morning sunrises will greet you from the large master bedroom with many windows and a slider that opens to the lanai. A large walk in closet and bathroom with double sinks and 2 linen closets complete the master. On the opposite side of the house you will find the 2 bedrooms. The first bedroom en suite has ocean views, the second bedroom suite has garden views with both bedrooms having large closets. Galley kitchen has a breakfast bar and is adjacent to the family room which have sliding doors to the side yard. Tile floors throughout the home. Both covered lanai's run the length of the home and have tile floors. A two-car garage with space for a workshop is adjacent to the house. The house is surrounded by lawn with a few fruit trees and a garden shed in the lower section of the property. Property is gated and fully fenced. Property is being sold "AS IS" and needs TLC. Leilani Estates has paved road, home mail delivery and an active community center. Pahoa Village is approximately 5 miles from Leilani Estates it's known for its colorful and unique old town feel with many excellent restaurants and the new Pahoa District Park featuring a swimming pool and many ball fields.

What a deal!! Oh, the lava has not destroyed this property – yet. But, you better hurry if you are interested.

A little humor never hurts but we all need to pray for the people living near the Kilauea Volcano on the Big Island of Hawaii. This eruption is an ongoing emergency disaster. Thousands of people (men, women, children, and pets) have been evacuated from their homes for more than two weeks. They have been living with friends, staying in shelters (like the one pictured below), living in tents, and some have left Hawaii vowing never to return.



Big Island Shelter

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