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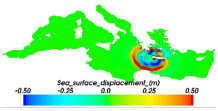
A Mega-Tsunami Could Strike Mediterranean Anytime!

At least once every 800 years



Mediterranean Sea (green) and the degree of sea-level displacement induced by a tsunami similar to that from the A.D. 365. M. D. Piggott, G. J. Gorman, and C. C. Pain/Nature Geoscience

Don't think that tsunamis are something connected only to the Indo-Pacific areas and that summering on the Mediterranean shores is safe. A mega-tsunami devastated eastern Mediterranean in 365 A.D. And this could repeat. A new research published in "Nature Geoscience" has detected the geological fault off the coast of the Crete Island (Greece) that could have slipped, causing the mega earthquake responsible for the ancient tsunami. The team also measured that megaearthquakes (over the magnitude 8) could heat the area at about each 800 years. The team investigated remains of sea creatures (like algae and corals) that formed a band along the ancient shores of Crete. "The ancient shoreline resembles a bathtub ring high above the sea on the cliff face," said lead author Beth Shaw of the University of Cambridge, in England. It appears that western Crete was suddenly raised in one jolt at the date of the tsunami. "10 m (33 ft) of uplift is quite astonishing. Unexpectedly, our results confirm that all [of the] uplift did happen in the 365 A.D. earthquake," said Shaw. A weird event had been detected 150 years ago in the area. In the 1850s, while Capt. Thomas Pratt was mapping the Aegean Sea, he signaled the presence of an ancient Roman harbor on western Crete, located 20 ft (6 m) above the sea level. Later digging discovered skeletons in collapsed buildings and coins from the 4th century. But signs of destruction caused by an ancient mega-tsunami were encountered from Cyprus to Libya. Mollusk shells from the ancient shoreline of Crete were dated to the same period. Moreover, impressive historical records of the event do exist. "The solidity of the whole earth was made to shake and shudder, and the sea was driven away. The mass of waters returning when least expected killed many thousands by drowning. Huge ships … perched on the roofs of houses …and others were hurled nearly two miles [3.2 kilometers] from the shore," wrote the historian Ammianus Marcellinus about the impact of the tsunami in Alexandria, Egypt. Other accounts describe the earthquakes and tsunami striking other Mediterranean cities at the same date. A computer model enabled the team to assess the size of ancient tsunami waves, and revealed the magnitude of the event on various shores, fitting historical and archaeological proofs. The team connected the event to a previously unrecognized fault located along a submarine rift named the Hellenic Trench, close to a larger fault, where two continental plates collide. "One fault is lubricated, slipping quietly without earthquakes. The other slips infrequently in large earthquakes, which can cause tsunamis," said Shaw. GPS data of the movement of the continental plates allowed the researchers to asses the energy stored in the "sticky" fault, which could slip, provoking a massive earthquake once every 800 years. "That the Mediterranean, with its growing coastal population in excess of 130 million … could host a large tsunami at any moment is cause for considerable unease," Roger Bilham, a geophysicist at the University of Colorado in Boulder, told National Geographic News. A similar event in the area could have wiped out Atlantis. The myth of the Atlantis, first mentioned by Plato 2,400 years ago, talks about a real ancient civilization destroyed by the sea. The Atlantic Ocean got its name from Atlantis, as many people placed its location in the middle of this ocean. But historical data say this civilization could have been located in the Crete Island or in a nearby island, belonging to the pre-Greek Minoan civilization. 4 millennia ago, Minoans developed a complex civilization in the islands of the Eastern Mediterranean, while the rest of Europe was still in the Neolithic ("New Stone Age"), building palaces, paved streets and sewers, while Greek tribes lived in shelters. These black-haired and brown-eyed people were not Indo-European, but rather related to the Basque or Caucasus ethnic groups, and the center of their civilization was the island of Crete, in the southern extremity of the Aegean Sea. Minoans

are believed to have come from Asia Minor 5,000 years ago, and had a developed bronze technology. They quickly replaced a Neolithic civilization of Crete. The powerful Cretan fleet dominated the Aegean Sea for centuries. Around 1450 BC, the Minoic civilization suddenly disappeared, being destroyed, it seems, by a giant tsunami. The Minoan civilization was made of seafarers and their towns were located mostly on the coast, thus being exposed to tsunamis. The ancient tsunami could have been as powerful as the 2004 Asian one that killed 250,000 people and was connected to the huge eruption of the volcano on the Santorini (Thera) island, 70 km (43 mi) north of Crete, up to 10 times more powerful than the Krakatoa's eruption in 1883. Volcanic stones even reached the Egyptian shore of the Sinai Peninsula and its sound was heard over 3,000 miles (4,800 km) away. The eruption destroyed everything on a distance of 150 km (92 mi). The Santorini's huge cone fell into the sea together with the western part of the island, provoking a big wave that flooded many islands in the Aegean Sea and eastern Mediterranean shores. The Atlantis, no matter if it was an island or a city (the continent variant is too fictional), could have collapsed due to earthquakes and tsunamis accompanying the eruption. The stifling volcanic ashes impeded the sunlight reaching the eastern basin of the Mediterranean for days. About 80 cubic km of Santorini either blew up or fell into the sea. Excavations made at Santorini, in 1966-1967, revealed the presence of a rich royal city, buried in the volcanic debris and kept intact as it was when the eruption occurred. Probably the inhabitants of Santorini or Crete did not want to admit that their splendid cities were gone, so the legend of the Atlantis, still flourishing on the bottom of the sea, began. 3,450 years ago, the wave may not have destroyed Knossos, the inland Minoan capital, but the massive ash falls could have ruined the crop, causing famine. At the same date, the Egyptians mentioned a huge invasion of the "People of the Sea," seafaring raiders that could have been chased away from the Crete Island by famine.