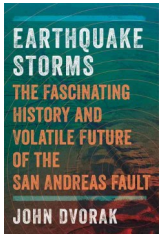


Earthquake Storms : The Fascinating History and Volatile Future of the San Andreas Fault

Earthquake Storms



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This is the kind of interesting read that can make you dream of switching fields. Both the title and subtitle are misleading, it's about much more than earthquake storms (a series of large quakes that strike the same fault close together in time), or even the San Andreas Fault, famous for being that volatile line that runs from the California redwoods to its southern deserts.

Although it does focus on ground shaking in California, it's also a compendium of earthquake lore that describes quakes in Turkey, Italy, and other places. One intriguing section describes how recent research confirms that the famous Delphi of Greek mythology was a site of earthquakes. The priestesses there supposedly sat before a crack in the earth and made prophecies. Scientists have found that the earth nearby released ethylene, a gas that is now known to cause trances.

The book begins with the narrative of a young San Franciscan mechanic who took a daily swim in the ocean. One morning he walked to the beach as always and after being whacked repeatedly by waves, then thrown upon the

sand, tried to stand up and could not. A long shaking ensued and he realized he was experiencing a major quake. When he could move his legs again, he ran over the sand which turned phosphorescent as he touched it. This was of course the great SF earthquake of 1906. What I particularly liked about the book was how it incorporated biographies and the working habits of many Californian geological pioneers. It begins with California's first state geologist, Josiah Dwight Whitney, whose father wanted him to study law, but he resisted and studied earth science instead.

The state hired him to survey mineral deposits. After he arrived, several legislators urged him to tell them immediately where new mineral sightings were located. He said that he could not; he would publish them all at once and give everyone in the state an equal chance to mine them. This did not sit well with the officials.

Then after leaving his Eastern suits behind, donning denim and flannel, he tramped and rode a horse cart through the state. His first report was on paleontology, totally freaking the officials out—the last thing they wanted to discover was ancient reptiles. His pay and expenses was docked by half. His second report listed every active mine in the state, but did not include any new ones. The officials now lowered his pay to zero. His work is now considered a masterpiece, exquisitely written.

Another geologist Grove Karl Gilbert was also imported from the east coast. When he took the train out West, he noticed how different the western mountain ranges were from the eastern ones. He called them "Basins and Ranges," a term still used to day. When he stared at the ranges he noticed that they were tilted at an angle. This leaning inspired him to believe that the earth had been uplifted and stretched. Previous to Gilbert's work, many believed that

earthquakes were caused by chemical explosions under the earth.

Dvorak also introduced me to the science of paleoseismology which is fairly new--from the late 1960s. A young geology student named Kerry Sieh got curious about the last major quake before the '06 San Franciscan one. Against his professor's wishes he started biking and walking a 200 mile stretch of the San Andrea; he was looking for geological evidence of the 1857 quake about which little was known. Eventually, he found a spot where a creek poured off the San Gabriel Mountains into the Mojave. Here at a 30 foot erosion trench, with a simple shovel, he dug. Two feet below the surface, he found a broad warp in the ground. Later he used a backhoe and a bulldozer, and discovered by way of carbon dating the site of the 1857 earthquake and one of the 1812 earthquake (that struck Capistrano, the place of sparrows) and one that occurred in 1500. He found another one that dated back to 730 A.D.

Predictions: Will there be another big earthquake in California? Yes. And this is when the storms of the title come into play. It may be a major quake on the San Andreas or it may be a whole series of them. In any case, Californians should get ready.

Posted by Dory L. on April 3, 2014

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