

Special paper defines the nature, aim of paleoseismology

August 4 2011

How is paleoseismology defined and what is its main aim? Is it concerned only with prehistoric earthquakes identified and characterized from the “geo-archives” of a particular location or fault, or can it be applied to the study of recent events? This new Special Paper from The Geological Society of America answers these questions and covers a wide spectrum paleoseismic approaches.

According to volume editor Franck A. Audemard M. of the Venezuelan Foundation for Seismic Studies and colleagues, a common misconception about paleoseismology is that it applies to prehistoric earthquakes only. Says Audemard, “This surely used to be, and still is, its main focus, but it does not cover all current potential spectra and unnecessarily restrains paleoseismology to a strict time window.” In fact, according to the book’s introduction, “paleoseismology should be understood as the study of the ground effects from past earthquakes preserved in the geologic and geomorphic record, regardless of the time of occurrence.”

This volume contains 10 original papers linking together four different disciplines under the umbrella of “paleoseismic investigations”: instrumental seismology, historical seismology, archaeoseismology, and paleoseismology. The introductory [paper](#) explores and explains how the seismic history of a given active fault can be discovered by geologic means (using direct or indirect indicators) for a particular tectonic setting. A second overview paper describes and discusses how to approach lakes and their sedimentary record for paleoseismic purposes.

Further contributions deal with conventional paleoseismology by trenching, covering the entire spectrum of tectonic environments (strike-slip, normal, and thrust faults), and there are two overview papers. Additionally, one chapter addresses paleoseismology of slide-dammed lakes. Last but not least, the final chapter analyzes paleoseismic data from the perspective of seismic hazard assessment.

Provided by The Geological Society of America

Citation: Special paper defines the nature, aim of paleoseismology (2011, August 4) retrieved 26 April 2024 from <https://phys.org/news/2011-08-special-paper-nature-aim-paleoseismology.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.