

San Joaquin Geological Society

Date: Tuesday, April 12, 2011

Time: 6 pm Social Hour

7 pm Dinner 8 pm Lecture

Place: American Legion Hall

Cost: PSAAPG Members & Mesozoics \$20 w/reservation

\$25 without reservation

Non PSAAPG Members \$25 w/reservation \$30 without reservation

\$30 without reservation
Full-time Students with ID:
Free, Courtesy of Chevron

SJGS WEBSITE

http://www.sigs.com/

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By Friday, April 8, 2011

secretary@sanjoaquingeolo gicalsociety.org or by phone 654-7940 or on the SJGS Website: http://www.sigs.com "Cretaceous-Cenozoic Plate Tectonics in Western North America and what it tells us about the geological evolution of California"

Dr. Tanya Atwater
Professor Emeritus of Earth Science at UCSB

RIO

Dr. Tanya Atwater

Dr. Tanya Atwater is a professor emeritus of Earth Science at U.C.S.B. She was educated at M.I.T., U.C. Berkeley and Scripps Institute of Oceanography, earning her PhD in 1972. She was a professor at M.I.T., then joined the U.C.S.B. faculty in 1980, becoming Emeritus in 2007. Atwater has a lifelong passion for large-scale landscapes and the plate tectonic processes that create them. She is especially well known for her works on the plate tectonic evolution of western North America and the San Andreas fault system. Atwater is devoted to public education, working with teachers, parks and museums, and the media to spread Earth information and excitement to all. She has created a collection of geological animations that are widely used by educators at many levels (check them out at http://emvc.geol.ucsb.edu). Her recent honors include the N.S.F. Director's Award for Distinguished Teaching Scholars, the Leopold von Buch Medal for "outstanding career contributions in the geosciences" and, with Joann Stock, the G.S.A. Structure and Tectonics Division's Best Paper Award. She was elected to the National Academy of Sciences in 1997.

ABSTRACT

The geological history of Western North America is dominated by plate tectonic relationships along the Pacific rim. The Sierran subduction zone, the Laramide orogeny, the early Cenozoic ignimbrite sweep, the Columbia River basalts and Yellowstone hotspot, Basin Range expansion, and, of course, the establishment of the San Andreas plate boundary, all were caused by or deeply influenced by plate tectonic events. In this broad-brush animated lecture, we will examine these various events and consider how they marked our landscapes in the western U.S. and, especially, how they influenced the evolution of features in California.