

THEN & NOW

EARTHQUAKES, VOLCANOES AND GLACIERS FORM ROCKS

BY MIDGE NEFF-LECLAIR, PhD, HISTORY



We are surrounded by

rocks of many kinds, but did you ever wonder how so many came to be here? Being curious, I thought I'd ask and was amazed at the answers and explanations received.

Geology is the study of the earth, and tries to explain how the earth was formed and how it continues to change constantly. Scientists, called geologists, study rocks, soil, mountains, rivers, oceans, caves and all other parts of the earth. The word "geology" comes from the Greek words "ge"

(earth) and "logos" (study). It is believed that earth is about four and a-half billion years old, with most changes taking place slowly.

Earthquakes lift huge pieces of land creating mountains. Hot molten lava flows from volcanoes, cools and forms hard rocks. Great rivers of ice, called glaciers, slide slowly down mountains, carrying rocks, soil and debris with them. As they melt, they leave the rocks and debris behind or in the ocean and sometimes along

the coastlands. (Several National Parks now are dedicated to the rock formations along the coast in northern California).

Water creates a tremendous force for change spreading layers of mud and sand that gradually harden into stone. A strong force that moves sediment and rocks from one location to another, eroding river banks, and changing the topography, water has been sometimes beneficial, but many times destructive.

There are two main fields of geology - physical and historical. Physical geology is the study of the materials that make up the earth and historical geology deals with the history of the earth. Physical geology includes: meteorology (study of atmosphere and weather) climatology, oceanography, limology (study of inland bodies of water, such as lakes and ponds). Structural Geology (my favorite), the study of rocks, their shapes, locations deep in the earth and the causes of changes. Geophysics, geochemistry,

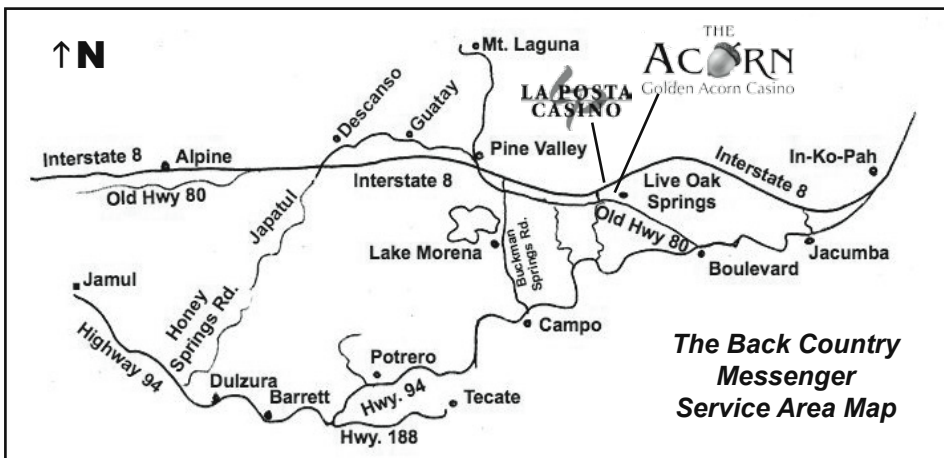
petrology (study of rocks) mineralogy, geochronology, sedimentology, paleoecology. Paleogeography, stratigraphy, and paleontology are Historical Geology.

In the 300s B.C. the Greeks were the first to write about the earth. The great Philosopher Aristotle had a pupil, Theophrastus, who wrote a paper "Concerning Rocks." This work gathered together for the first time all the known knowledge about rocks, minerals, and fossils.

SEE ROCKS PAGE 28

A Back Country Guide

To help you find your way around the back country



ALPINE: Motels, fast foods, restaurants, shops, health care, gas & lodging, historical significance, Viejas Casino and Factory Outlet Center, Post office, Churches, library, sheriff and fire protection, and community center.

DESCANSO: The Descanso Junction restaurant, the Trading Post, Perkins Store center, Camp Oliver, Historical sites, Post office, Churches, CDF, schools, and library along with a community center.

PINE VALLEY: Gas, restaurants, grocery, dental, lodging, County Park, camping & hiking, horseback riding, historical sites, ORV area and U S Border Patrol facility, churches, library, Post office and community center.

CAMPO: The Railroad Museum, Motor Transport Museum, Stone Store Museum, fishing and camping at Lake Morena, gas, groceries, Lake Morena RV park, the Malt Shop and El Rancho Bar and Grill, home of Benny's famous

ribs. The Campo Diner, Circle K, Trading Post, Mtn. Health Center, Pacific Crest Hiking Trail, U S Border Patrol, ORV sites in Corral Canyon and along the US Mexican border, Churches and a library, CDF and Campo Fire, post office and community center. In addition the Golden Acorn Casino.

POTRERO: The Potrero Store, Café 94, Post office, CDF, County Park, Library, schools, a Christmas tree farm, hiking, camping and a community center.

TECATE: the gateway to old Mexico, a passport is required to enter the United States through the International border.

BARRETT: home of camping, fishing, and the best all you can eat fish fry.

BOULEVARD: The La Posta Casino and restaurant, Live Oak Springs Resort, camping, cabins, grocery stores, gas, liquor & deli, markets, auto mechanics, library, community

center, trading post, hotels, coins and collectables and the world famous Wisteria Candy Cottage, border patrol, fire and sheriff depts.

The "Sacred Rock Reserve" is a live-in park that offers overnight camping and motor home traveler's spaces with full hook ups. Restrooms, showers, swimming pool, and many large oak trees are within the reserve.

JACUMBA: The Hot Springs Resort and Spa, Laundromat, grocery store, health center, library, community center, park, glider port, and churches in town. Off the interstate is the De Anza Resort and two gas stations.

IN-KO-PAH: Home to an equipment sales center and the Desert View Tower. The tower is a roadside attraction with gifts, shade, drinks, restrooms and a view for many miles.

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BCM Online Edition Available

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Vol. 3 No. 7
 September 2009

PO Box 71
 Campo, CA 91906
 (619) 933-3789

Available online:
www.backcountrymessenger.com
 Published on the fourth Monday of each month
 Print Circulation: 3000

Published by Campo Online
 Owners: Tony and Lynn Neff
 Editor: Lynn Neff
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