

Geological History Of The San Emigdio Mountains

June 22, 2017 Bonnie Ketterl Kane

The San Emigdio Mountains form one of very few traverse mountain ranges – running east and west – in the Americas. This traverse range joins together the Coastal Mountains to the west with a portion of the southern Sierra Nevada Mountains, now called the Tehachapi Mountains to the east.

The San Emigdio Range became the most southerly end of a gigantic horseshoe that extends around a great valley to the north. The valley within the horseshoe was once an inland sea that in time became a fresh water lake as it was slowly cut off from the ocean and began to only receive its water from the rivers of rain and melted snow that ran from the slopes of the mountains that surrounded it. These powerful streams, overloaded with sediments, soon created the Great Interior Valley of California now known as the San Joaquin Valley. As this valley filled with soil, the body of water within diminished to shallow lakes located in the central and southern end, which by the 1700's and 1800's were still surrounded by great marshes and sloughs.

A great valley also formed to the east of Gorman, now called the Antelope Valley for the vast herds of antelope that once roamed there. It is a valley that is about one hundred and ten miles long from east to west. The volcanic mountains in the western half of the valley have some twelve sizable creeks that still flow into the valley though most fill an underground reservoir. Shell fossils from the inland seas that once covered both the Antelope and San Joaquin Valleys can still be located from the lowlands to the mountain tops that surround them.

Remains of the Neenach Volcano of millions of years past, which would have been located in the western half of the Antelope Valley, can be seen along the present Gorman Post Road and along the San Andreas fault for some two hundred miles to the north as the North American Plate has carried those remains inch by inch to the north.

The highest mountain in the San Emigdio Mountain Range is Mount Pinos – called “Iwinimu” by the first people. The second highest mountain in the Range is Frazier Mountain, once known as “Toshololo” by the first people. This range of mountains was formed by many still active earthquake fault lines as well as numerous now extinct volcanoes of the region.

The San Emigdio Mountains are undesirably unique in that three major earthquake fault lines go through or converge there. One of the world's largest faults, the San Andreas Fault, runs in a north/south direction through the entire range, the Garlock Fault comes from the northeast and connects with the San Andreas just east of Frazier Park and the Big Pine Fault comes in from the northwest meeting the San Andreas at the community of Lake of the Woods. Signs of fault activity, such as crevices, mounds, uplifts, etc, are easily recognizable throughout these mountains.