

# SAN ANDREAS FAULT

The San Andreas Fault, California's major earthquake rift zone, passes through San Francisco and comes ashore two miles south of Fort Ross, then runs north and through this orchard. The fault is the result of the boundaries of the Pacific and North American plates passing by each other. On this portion of the fault the movement tends to be in sudden large events, and it is thought that this section of the San Andreas Fault moves significantly only every few hundred years. California's 1906 earthquake was the result of such sudden motion.

The fort itself lies on marine sediments to the seaward side of the fault. These sediments were deposited underwater on the Pacific plate forty to sixty million years ago, and have moved from the south about three hundred miles up the California coast. In 1906 the land at Fort Ross shifted 12.6 feet along a narrow well-defined area above the plate movement.

The resulting surface features can still be seen today. Offset creeks, sag ponds (depressions along the fault which often become filled with water in winter), escarpments, shifted fences, and damaged trees are lasting evidence of the quake.



Earthquake Created Sag Pond



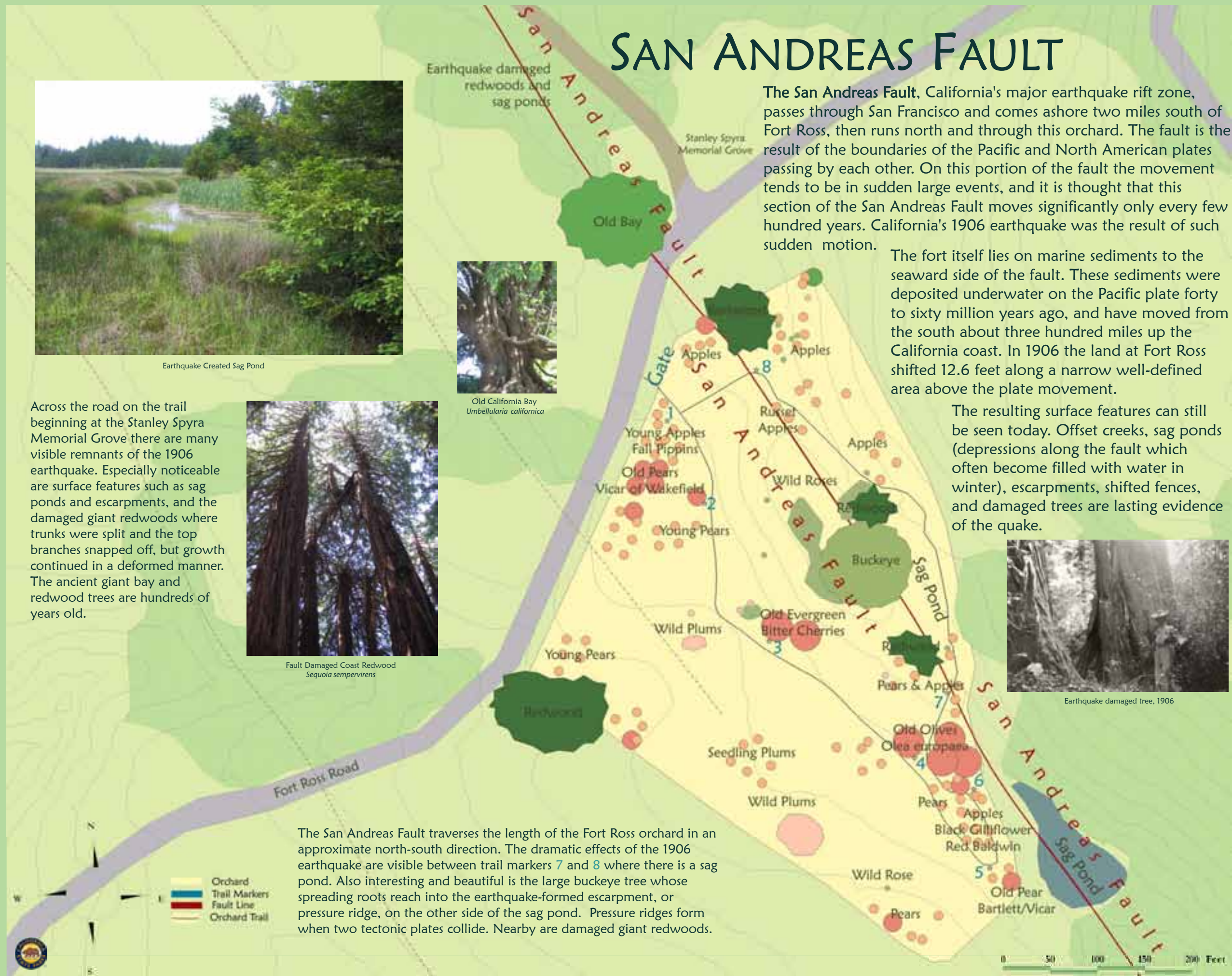
Old California Bay  
*Umbellularia californica*



Fault Damaged Coast Redwood  
*Sequoia sempervirens*

Across the road on the trail beginning at the Stanley Spyra Memorial Grove there are many visible remnants of the 1906 earthquake. Especially noticeable are surface features such as sag ponds and escarpments, and the damaged giant redwoods where trunks were split and the top branches snapped off, but growth continued in a deformed manner. The ancient giant bay and redwood trees are hundreds of years old.

The San Andreas Fault traverses the length of the Fort Ross orchard in an approximate north-south direction. The dramatic effects of the 1906 earthquake are visible between trail markers 7 and 8 where there is a sag pond. Also interesting and beautiful is the large buckeye tree whose spreading roots reach into the earthquake-formed escarpment, or pressure ridge, on the other side of the sag pond. Pressure ridges form when two tectonic plates collide. Nearby are damaged giant redwoods.



Earthquake damaged tree, 1906