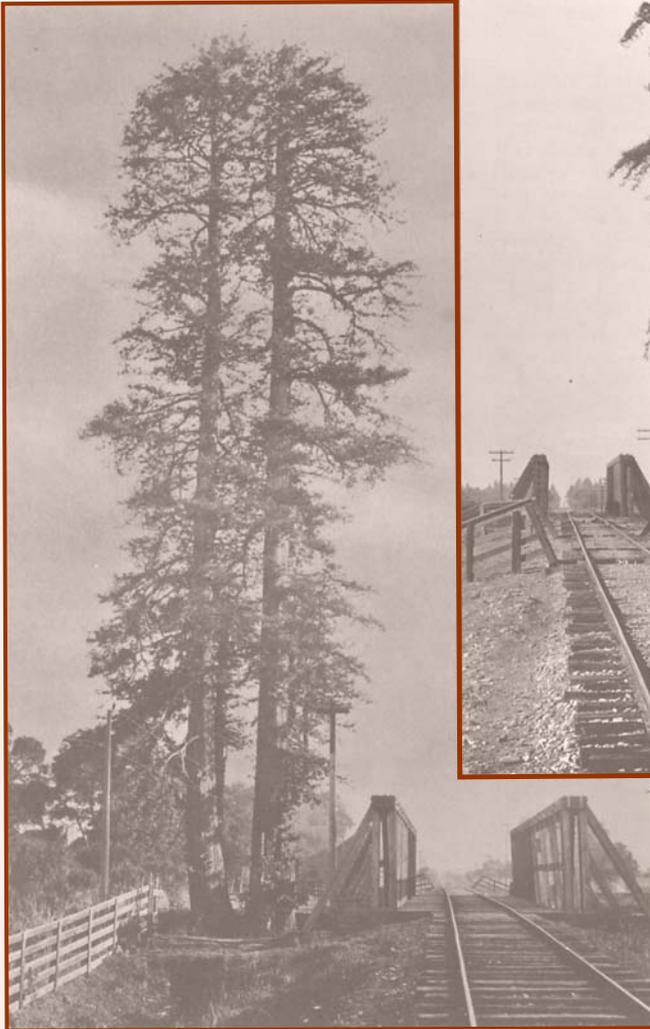
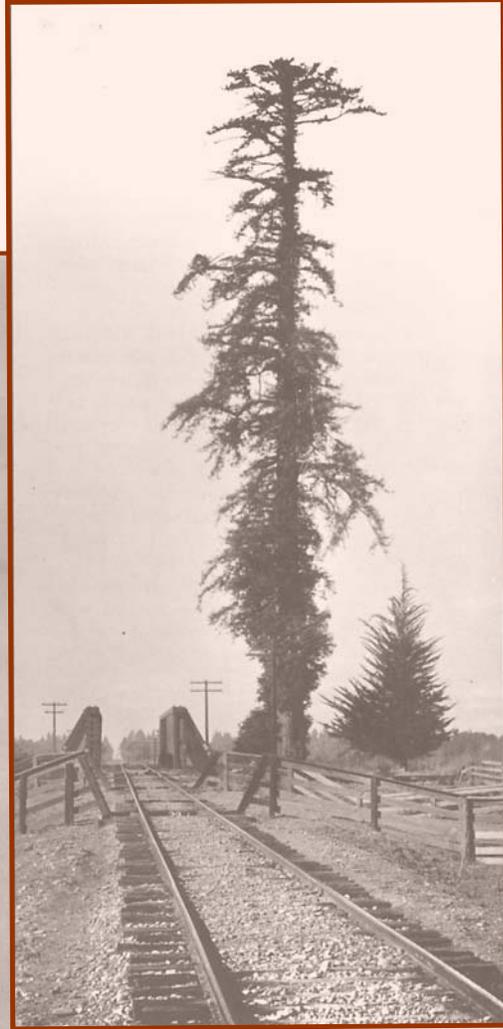


Dendrochronology in the Bay Area: Using Tree Rings to Date Trees...and Earthquakes, Volcanic Eruptions, and Ecological Changes

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We can determine the age of a tree by counting the light and dark ring pairs (see above) that a tree puts on each year as it grows. The widths and other characteristics of tree rings can be correlated to the environmental conditions that existed during the growth of these rings. For example, wide rings correspond to wet years; narrow rings, to dry years. Other environmental conditions, such as temperature, other past climate changes, or effects of pollution, can be determined from tree ring shape. Recent tree-ring histories can be calibrated against modern records, then past changes can be inferred from tree ring histories that extend back in time before modern records were kept. Old trees, like El Palo Alto (see below), or the Douglas fir and coast redwood from Muir Woods (see display table) can provide long records of past environmental conditions and changes.



Above: "The single tree, today's Palo Alto, in a north looking view taken in 1891."

Left: "The double trunk tree looking south, before January, 1886, when the left trunk fell after 24 inches of rain fell in 3 months. The fallen giant was 960 years old"

From "History of Palo Alto" by Pamela Gullard and Nancy Lund, 1989, Scotwell Associates. Photos courtesy of Palo Alto Historical Association.

El Palo Alto has not been cored to determine its exact age, but if the above estimate of 960 yrs is accurate, the tree should now be 1076 years old. Such trees provide valuable information on past climate and ecological conditions.

El Palo Alto (... or Los Palos Altos?): "Actually, there is some evidence that El Palo Alto was once a triplet!...Popular history and legend tell us that Gaspar de Portola and his Spanish expedition camped under El Palo Alto in 1769...Is Palo Alto the actual tree the Spanish expeditionary parties used as a landmark and campsite? Despite the fondest wishes of many historians and most Palo Altans, the preponderance of evidence seems to suggest that it is not." (Gullard and Lund, 1989, p. 20-23; see above).