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A Century In The Life Of Trees

For my project I was observing the changes that the Ponderosa Pine Forest of Boulder County has undergone over the last century. I predict that stand density and health over the last 133 years has changed due to factors such as grazing, logging, fire suppression and changes in forest environment. I chose my site, Mount Sanitas in Sunshine Canyon, and then using the method of repeat photography, I obtained two pictures of the site from 1875 and 2007. I marked the area of my site and the boundaries. I plotted the locations of all of the present day trees and measured their circumferences and then created a second graph of the tree plots from 1875. I found the diameters from the trees using the tree circumferences; next, I cored 32 trees with varied diameters and found the tree ages of the cores. Using the data from the tree cores, I found that with an increase in diameter there is an increase in tree age. Next, I looked at the factors that contributed to increased stand density. I discovered that the slope was too steep to allow grazing and there were no records or evidence of logging on the site. Fire suppression is a dominant issue for much of Boulder County's forests, and evidence showed tree in-growth. I concluded that fire suppression must have help lead to the 400% stand increase. The primary reason for the increase was the geology of the site and natural fluctuations in the forest environment.