CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY

Name(s)
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Project Number
J1734

Project Title
Where Do Redwoods Grow?

Abstract

Objectives/Goals
My objective is to determine how and if elevation, bedrock type and distance from streams affect the distribution of coast redwoods in Santa Cruz mountain forests.

Methods/Materials
The materials I used were geologic and topographical maps, a tape measure, a ruler, transparencies, and a car. What I did was go up roads and every 160 meters record if there were no, few, some, mostly or all redwoods in that area. I then mapped out ten 50m x 50m test areas (two for each quantity of redwoods). I counted all the trees in the test areas and compared with the number of redwoods and found out what the bedrock and elevation were. These calibrated my eyeball estimates. I drew my tree count on transparencies that overlaid the topographical map and compared the different components.

Results
My results show that redwoods didn't grow much where elevations were above 2500 feet and not at all below 250 feet--most redwoods grew right in the middle. Also, the closer an area was to a stream, redwoods generally grew better there then farther away. Redwoods overall did not grow on sandstone very much; other types of bedrock didn't have much of an effect. Another interesting thing was that redwood distribution changed very quickly.

Conclusions/Discussion
In the end, distance from a stream made the most difference to where redwoods grow; the closer to a stream, the more likely there was to be abundant redwoods. Elevation's effect was only that redwoods didn't grow too high up or too low. Other than not usually growing in sandstone, bedrock didn't seem to have much of an effect, redwood trees were usually abundant in granite or schist that was near a stream.

Summary Statement
My project is about coast redwood distribution based on elevation, bedrock and distance from a stream.

Help Received
Mother helped drive me around and with board assembly.