



CALIFORNIA STATE SCIENCE FAIR 2010 PROJECT SUMMARY

Name(s) Natalie G. Opalach	Project Number J1220
Project Title Are Invasives Pervasive?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective was to see if non-native species that occur in a young growth forest can invade an adjacent old growth forest. Background research suggested non-native species would cover twenty-five percent of the young growth forest and invade a short distance into the adjacent old growth.</p> <p>Methods/Materials Three sites each consisting of a young growth forest and adjacent old growth forest, were located. A transect was set through each site. Each transect consisted of eleven plots, including five plots straight into the old growth, one plot on the edge between the two forests, and five plots straight into the young growth. Plots along the transects were twelve feet by twelve feet in size, and spaced fifty feet apart. Species names, percentages, and other information were recorded at each plot on a plot card made specifically for this study. Thirty three plot cards total for the thirty-three plots: three transects with eleven plots each.</p> <p>Results The average of non-native species on young growth plots was eight percent, the average of non-native species on edge plots was four percent and the average of non-native species on old growth plots was zero percent. I found non-native plants on only five of my thirty-three plots. All five of these plots had pampas grass and one had buttercup as well. Curiously, one old growth plot contained a non-native species, a young pampas grass. The other four plots containing non-natives were either young growth or edge plots. Interestingly, all four of these plots were located on old abandoned logging roads.</p> <p>Conclusions/Discussion Non-natives in young growth did not affect non-natives in old growth. The only pattern in non-native species that I found was that non-native species were commonly associated with old logging roads. In fact, these roads were the only places I found non-native species in the young growth and the edge. The canopy above the logging roads was widely open; I think that foresters may be able to reduce the amounts of non-native species in forests by planting trees on the old roads. My hope is that roads would blend into other areas of the forest and would no longer be an ideal area for non-native species within the forest.</p>	
Summary Statement Studying the likelihood of non-native species invading an old growth forest from an adjacent young growth forest.	
Help Received Dad helped identify species and edit board; Tony LaBanca, Botanist, gave me an interview; Mom edited writing; Sister edited writing	