



**CALIFORNIA STATE SCIENCE FAIR  
2014 PROJECT SUMMARY**

<b>Name(s)</b> Guadalupe Melgarejo	<b>Project Number</b>  34304
<b>Project Title</b> Native vs. Foreign: Which Plant Is More Resilient against Eucalyptus Leachate?	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> Does Eucalyptol, which is secreted in eucalyptus leaves, affect the development of native and foreign plants and potentially result in the elimination of native species in an ecosystem?</p> <p><b>Methods/Materials</b> Using crushed eucalyptus leaves in two different aqueous concentrations, along with water as a control, soaked in paper towels seeds from domestic sources and from Australia were placed and germination rates recorded.</p> <p><b>Results</b> I found that the domestic seeds were largely inhibited in germination and in growth among the survivors while the single Australian seed (Swan River Daisy) was considerably more active in growth and the germination rate was found to be 100%.</p> <p><b>Conclusions/Discussion</b> The eucalyptus leaves containing eucalyptol inhibited the germination and growth of the seeds found domestically in the United States while the Australian seed had greater growth and percent germination in comparison. I would conclude the Australian seed has developed resistance to the inhibiting affects of the eucalyptus leachate (eucalyptol) over time which would explain its' higher rates of survival and growth.</p>	
<b>Summary Statement</b> Eucalyptus chemicals will inhibit domestic plant growth and germination far more than native Australian plants that have developed resistance to the Eucalyptus chemicals like eucalyptol.	
<b>Help Received</b> Mr. Callaway, my Biology teacher, acted as my advisor.	