



**CALIFORNIA STATE SCIENCE FAIR  
2008 PROJECT SUMMARY**

<b>Name(s)</b> <b>Sean V. Callero</b>	<b>Project Number</b> <b>J1506</b>
<b>Project Title</b> <b>Glassy Winged Sharpshooter: Wrath of Grapes</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The purpose of this experiment is to find an effective at-home, eco-friendly method for the control of the Glassy- winged Sharpshooter, a vector for Pierce Disease. The grape industry of California is under a serious threat because of disease spread by the glassy winged sharpshooter. <b>Methods/Materials</b> My objective was to study the current larvacides and pesticides used and their effects on the sharpshooter and then to make my own plant extracts from plants found in Ventura County to determine whether these plant extracts could have a lethal effect on the sharpshooter nymphs. I studied and tested 20 plants found in, and around Thousand Oaks and determined that certain extracts were very effective in killing the sharpshooter at its nymph stage before becoming a problem. <b>Results</b> I found that several plant extracts have a lethal effect on the nymph stage of the glassy winged sharpshooter. However, it was very difficult to maintain a culture of sharpshooters in terrariums. They are sensitive and do not thrive in closed conditions. For this reason, my data may not be an accurate reflection of what may happen when the sharpshooter is exposed to the extracts in field tests. Therefore, I am continuing to work on this experiment in the field so that I can obtain additional data needed to prove my hypothesis. <b>Conclusions/Discussion</b> In conclusion, under controlled circumstances, this experiment proved my hypothesis by demonstrating that there are several plants growing in Ventura County having larvacidal capability. My initial findings could aid in the further development of new and improved larvacide strategies to control sharpshooter populations in and around Ventura County thus preventing the spread of disease to the precious grape crops in California without harming the environment. I plan to continue my research even after this project ends working with methodologies of dispersing these new found larvacides.	
<b>Summary Statement</b> The purpose of this project is to develop an effective eco-friendly method for the control of the Glassy-winged Sharpshooter, a vector for Pierce's Disease which threatens California's grape industry.	
<b>Help Received</b> Parents for transportation to farms where sharpshooter is present in Ventura County. Mrs. Maiorca, my science teacher, for her support.	