



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY**

Name(s) Jules T. Hoang	Project Number S2305
Project Title The Effects of Temperature and Time on Bees on <i>A. cordifolia</i>	
Abstract Objectives/Goals The purpose of this experiment is to observe and record the behavior of the times bees pollinate and whether temperature and time affect the number of bees throughout the day. Along with the behavior of pollinating bees, to observe the ways of how invasive plant species thrive in a chaparral environment through how much it's pollinated. Because bees have been in detrimental population decline, my experiment can provide useful information to the favorable pollination conditions of these key species. Methods/Materials A. cordifolia Canon HF200 Olympus D5 Tripod Results The result of recording the flowers and observing the insects was temperature definitely having an effect of the amount of bee activity. However, not being dramatic because of the chaparral environment. In addition, 12pm-1pm resulted in the most bee activity. Conclusions/Discussion After filming <i>A. cordifolia</i> for nine days, I counted the number amount of bees that entered the screen for each day. The higher the temperature of the day, the number of bees increased and the colder the day, the less. In addition, the times that the bees most favored was from 12-1pm, resulting in the most amount of bees.	
Summary Statement After filming a type of invasive species for 9 days, temperature and time do have an effect on the number of pollinating bees.	
Help Received Mr. Hunt: helped develop my project by giving me different species of plants I could've used.	