



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> <b>Leilani N. Pemberton</b>	<b>Project Number</b>  22565
<b>Project Title</b> <b>The Effect of Air Temperature on the Stridulation Rate of Acheta domesticus</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The objective is to determine if air temperature affects the stridulation rate of Acheta domesticus. <b>Methods/Materials</b> 6 terrariums were set-up with one male and one female cricket in each terrarium. Using a stopwatch and thermometer, the stridulation rate (# of chirps per 15 seconds) was determined for all 6 crickets at 5 different temperatures. There were 3 trials for each cricket. First the average stridulation rate was calculated for each cricket at 5 different temperatures. Then the total average stridulation rate was calculated (total avg. stridulation rate = the avg. stridulation rate for all 6 crickets divided by 6). <b>Results</b> The total average stridulation rate at 27 degrees Celsius was 29.22 chirps. The total average stridulation rate at 13 degrees Celsius was 2.33 chirps. Cricket #1 had the highest average stridulation rate at all temperatures. The stridulation rate increased as the air temperature increased. The data showed that a one-degree difference in temperature impacted the stridulation rate. <b>Conclusions/Discussion</b> The air temperature does affect the stridulation rate of Acheta domesticus. Thus, my hypothesis that air temperature would affect the stridulation rate of Acheta domesticus was supported by the results.	
<b>Summary Statement</b> My project is about the effect of air temperature on the stridulation rate of Acheta domesticus.	
<b>Help Received</b> Mother checked out reference books and helped clean terrariums.	