



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Kristen D. Kelley	Project Number J1914
Project Title Do Crickets Communicate Information About Their Environment Through Chirping?	
Objectives/Goals Crickets are well known for their chirping behavior. According to research, male crickets chirp for three main reasons: 1) to attract a female, 2) as a warning or 3) when they are fighting. The purpose of this project is to determine if cricket chirping might also contain information about whether the crickets are located in a desirable environment. Information about whether the cricket is currently in a desirable environment would be important for the male crickets to attract females.	
Abstract Crickets are well known for their chirping behavior. According to research, male crickets chirp for three main reasons: 1) to attract a female, 2) as a warning or 3) when they are fighting. The purpose of this project is to determine if cricket chirping might also contain information about whether the crickets are located in a desirable environment. Information about whether the cricket is currently in a desirable environment would be important for the male crickets to attract females.	
Methods/Materials During the experiment, cricket movement was monitored to see if they move towards a preferred environment instead of a plain environment. Their choice of which direction they moved would be based upon chirping information from crickets located within the preferred and plain environments. This was completed by constructing a special testing container with two side compartments for chirping crickets in the two kinds of environments. Control tests were also done with no chirping in order to compare the results.	
Results The result of the experiment was that 78% of the crickets were attracted towards crickets chirping in the preferred environment. In most of the control experiments the crickets seemed to wander aimlessly.	
Conclusions/Discussion The conclusion is that it appears that crickets do exchange information when they are in a preferred environment.	
Summary Statement This project studies whether crickets communicate information about their environment through chirping.	
Help Received My parents assisted with purchasing the materials and helping create the testing container.	