



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Kristen D. Kelley	Project Number 22197
Project Title What Natural Substances Repel Ants Best in an Outside Environment?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of this project is to determine what natural substances will repel ants the best in an outside environment. This project was chosen due to the fact that ants are bothersome to many people. Also, many people want to use non-chemical methods to repel ants.</p> <p>Methods/Materials To perform this experiment, several substances were selected which research indicated might have some ability to repel ants. Portions of ant bait were covered with these substances at several different locations in the area of Encinitas, California. The substances were then checked for ant activity numerous times over a two-day period. The number of ants on each bait was recorded at each of these check points. The substances tested were ground cinnamon, ground cloves, fresh chopped basil, chopped orange peel and ground red pepper. Ricola Natural Herb Cough Drops were used as the ant bait since they are known to attract ants from common experience.</p> <p>Results The results of this experiment show that ground cinnamon and ground cloves both repel ants effectively. Basil and orange peel had little to no ant repellent ability. The effectiveness of the various substances were also affected over time as some of them dried up and some were affected by the environment (for example: water sprinklers and dew).</p> <p>Conclusions/Discussion The various substances each repelled or attracted ants differently. The results from this experiment suggest that sprinkling cinnamon or ground cloves where ants are entering a home should help control them.</p>	
Summary Statement This project was about the repellent ability of different natural substances on ants.	
Help Received Parents helped buy test bait and substances and drove me to test site. Science teachers advised what items needed to be in report and on board. Friend of father scanned in pictures.	