



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Kelley C. Boland	Project Number J1902
Project Title Why They Are Where They Are	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals There are two species of non-native snails in Morley Field, a San Diego park: the White Garden Snail (<i>Theba pisana</i>) and the Milk Snail (<i>Otala lactea</i>). Last year, for a class project, I studied the snails and found that the two species were only in the weedy plant site and none were in the native plant site. This year I tested the question: Is the distribution of the snails in Morley Field determined by the distribution of their preferred foods? I tested the hypothesis: If I put the two species of snails in tanks with weedy or native food, then I think the snails will eat only the weedy food, and not the native food.</p> <p>Methods/Materials I tested my hypothesis by collecting leaves from two common species of plants in the weedy site (Wild Radish and Crown Daisy) and from two common species of plants in the native site (Warty-Stem Ceanothus and Laurel Sumac) and setting them up in eight tubs. Each plant species had one tub with snails and one tub without snails (control). I measured the amount of leaf cover and number of leaf holes before and after the two-night experiment. I repeated this experiment a total of three times.</p> <p>Results I found that the weedy species, especially the Wild Radish, were eaten the most and the native species were hardly eaten at all. Both ways of measuring the amount eaten (percent leaf cover and number of leaf holes) showed the same result. The controls showed no signs of eating.</p> <p>Conclusions/Discussion My hypothesis, that the snails would eat only the weedy food and not the native food, was therefore supported. I think the snail's preference for the weedy plants is the reason why the snails do not live in the native plant area, where these weeds don't grow. The two species of snails may be dangerous pests in gardens and in farms but I don't think they are going to invade wild lands or native areas because they do not like the plants that grow there.</p>	
Summary Statement I tested the food preferences of two species of land snails and found that their preferences determined their distributions in a San Diego park.	
Help Received Dad gave general guidance; Dad and brother helped collect plants and snails; Mom helped set up tanks and washed them; Science teacher, Ms. O'Donnell, gave helpful suggestions and encouragement; Head Park Ranger Smith gave permission to go off trails to count and collect.	