



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Andryus K. Planutis	Project Number J1923
Project Title Snails on Their Trails: Do Snails Have Color Vision?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My objective was to study the ability of animals to recognize colors and try to understand how early in evolution it first appeared. I believe that so ancient animals such as snails may have color vision because their eyes are well developed, and some of their far relatives (cephalopod species) have an ability to see at least some colors. My expectation is that if snails can distinguish colors, they would choose green color, which is the color of their food and shelter.</p> <p>Methods/Materials Two sheets of paper, orange and light green were taped to the table side by side. Adult brown garden snails were placed one at a time in the middle of the line between these two color papers, their tracks were followed with pencil or visually until the snails left the paper border or stopped moving. The color of paper where the snail finished its track was marked in the notebook. The second and the third experiments were similar to the first one, except that a big piece of transparent glass was placed to cover the color papers. The green paper used in the third experiment was much darker than the orange one. Each experiment consisted of three trials of 20 snails each for a total of 60 snails.</p> <p>Results In the first experiment about 83% of the snails chose green. When color paper was covered with glass, about 73% of the snails chose green. Finally, when the light-green paper was replaced for the dark-green one, about 78% of the snails chose green.</p> <p>Conclusions/Discussion The results of my experiments showed that garden snails preferred green color to the orange one. This preference did not depend on the differences in smell or taste of the orange and green pigments (the glass prevented the snails from smelling or tasting them) or on the difference in brightness of these two color papers (the snails chose green when it was either lighter or darker than orange). My conclusion is that garden snails really do have the ability to see at least some colors, including green.</p>	
Summary Statement My project is about snails' ability to see colors.	
Help Received My Brother took pictures; my Mother printed graphs and helped to find books; Gary Platner provided snails.	