



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> <b>Ella Almazan; Rea Anna Embrador</b>	<b>Project Number</b> <b>S1901</b>
<b>Project Title</b> <b>Horn Snails</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective of this project is to observe and determine if there is a relationship between location of horn snails in regards to the size distribution, as well as parasitic prevalence. Location of the horn snail is predicted to be a factor of parasitic activity. If the horn snails are attached onto the grass, then parasitic activity is occurring within that snail. Another hypothesis tested in this project is the size frequencies in each of the mud/grass location. By initial observation, a lesser amount of snails seem to be encysted in the grass. A proposed prediction is that wider size distributions will be present in the mud than in the grass.</p> <p><b>Methods/Materials</b> Field experiments were conducted in a mud flap located in Seal Beach. Collections (3 total collections, with 4 ounce plastic jars, consisting of one grass and one mud collection in each) within a quadrat of an established size of 1024 cubic centimeters were made and later taken back to Dr. Pernet's lab to be measured with Vernier calipers. Twelve snails were taken from those collections to be cracked open with forceps and placed in sea water-filled petri dishes and then observed under microscopes to observe parasitic activity. Size in millimeters and parasitic activity were recorded in this experiment. Parasitic activity was defined as the observation of larvae in the digestive tract, and/or the observation of swimming Cercaria.</p> <p><b>Results</b> Analysis of the data shows that location does not exactly prove to be a significant factor of parasite activity. With the use of statistics, conclusions of the following were made. One can be 95% confident that one will find between an average of 2.384 and 6.282 parasites in every grass trial conducted. As with the location affecting size distribution, analysis also proves to have no significance. There was no major difference in distribution. On the other hand, both locations were high when compared to the average size taken from a resource, which is also the established control variable.</p> <p><b>Conclusions/Discussion</b> In conclusion, overall results reject the proposed hypothesis and prove that location of the snail does not significantly affect its parasite prevalence or the size distribution of the quadrant population.</p>	
<b>Summary Statement</b> This project observes the effect of location, grass or mud, on the size distribution and parasitic prevalence in Cerithidea California, also known as Horn Snails.	
<b>Help Received</b> Used lab equipment at California State University of Long Beach under the supervision of Dr. Bruno Pernet; Michael James Corpuz helped with statistical analyses; Mr. and Mrs. Embrador supplied transportation to mud flap; Mr. and Mrs. Almazan provided transportation to the lab and science fairs; Mr.	