



**CALIFORNIA STATE SCIENCE FAIR  
2011 PROJECT SUMMARY**

<b>Name(s)</b> <b>Rory R. Sawey</b>	<b>Project Number</b> <b>J2213</b>
<b>Project Title</b> <b>Hermit Crabs: More Than Meets the Eye</b>	
<b>Objectives/Goals</b> My experiment was to find out if hermit crabs have a color preference.	
<b>Abstract</b> <b>Methods/Materials</b> Hermit crabs are nocturnal. During the day they seek shelter from the light. They find shade by burrowing and/or finding shelter. I used this behavior to help determine their color preference.  For my experiment I set up an opaque rectangular box and put 4 hermit crab huts of different colors in each corner of the box. I used 4 land hermit crabs. I put one crab in at a time. Every test I put the crabs in the same order. I recorded what huts each crab went to and the order they did it in. I gave each hermit crab 5 minutes in the box. After each of the 4 hermit crabs had gone in the box once, I rotated the box to change the location of the colored huts. I then put the 4 hermit crabs back in the box one at a time in the same order.  The materials I used were 1 opaque rectangular box, 4 living land hermit crabs, 4 different colored huts of the same design, 1 white rectangular tray and 8 paper towels.	
<b>Results</b> I observed that the hermit crabs went to the white or blue colored crab huts on their first or second visit a majority of the time. I also observed that almost all of the time the hermit crabs went east when moving toward their first or second hut. The crabs appeared to follow each others trail in three out of four tests.	
<b>Conclusions/Discussion</b> My experiment was inconclusive because it appeared that another instinct took precedence. Hermit crabs may have a preference for white or blue colored huts. However, the crabs initially moved to huts in the east direction a majority of the time. It is possible this was due to a sense of direction or smell by following each others trail. I learned a lot from this and it was fun.	
<b>Summary Statement</b> The purpose of my project is to find out if a hermit crab has a color preference.	
<b>Help Received</b> Mother helped set up the experiment layout. Mother helped type report as I dictated what to write.	