



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> Ashley S. Wasser	<b>Project Number</b> <b>J1436</b>
<b>Project Title</b> <b>Nutrient Modification of the Convergent Lady Beetle, Hippodamia convergens Coloration</b>	
<b>Abstract</b> <b>Objectives/Goals</b> To determine the effect of rearing Hippodamia convergens larva in a carotenoid enhanced environment on adult lady beetle spot and dorsal coloration <b>Methods/Materials</b> Experiment#1: 60 Hippodamia convergen larvae were divided into 6 experimental vials containing nutrient mixed with a test agent. The test vials included a control group,a 0.5 milligram and a 1 milligram dose Vitamin A group, a 0.5 milligram and 1 milligram dose Beta Carotene group and a 1 milligram Vitamin C group.In Experiment#2:60 larvae were similarly divided,however the nutrient medium was treated with one tenth of the dose utilized in Experiment #1,either 0.5 or 1 microgram of test reagent <b>Results</b> Vitamin A and Vitamin C groups exhibited no change in pigmentation. Microgram doses of Beta-Carotene resulted in a modestly increased dorsal pigmentation. <b>Conclusions/Discussion</b> Dorsal coloration of the Convergent Lady Beetle,Hippodamia convergens, appears to be carotenoid or nutrient dependent.	
<b>Summary Statement</b> This project is designed to demonstrate that pigmentation in lady beetles exhibits a linear relationship with dietary carotenoids.	
<b>Help Received</b> Mother heped with typing and board display,Equipment at Briarwood Medical group, Supervision of project with teacher Mr.Louis Garcia, mentors Douglas Taren of the University of Arizona and Dr. H.L. Wasser, endocrinologist	