



**CALIFORNIA STATE SCIENCE FAIR  
2003 PROJECT SUMMARY**

<b>Name(s)</b> <b>Amy L. Wolfberg</b>	<b>Project Number</b> <b>J1927</b>
<b>Project Title</b> <b>Green Tree Frogs Changing Color</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> My project was to test whether green tree frogs (<i>Hyla cinerea</i>) would change color to match their surroundings.</p> <p><b>Methods/Materials</b> A 20 gallon aquarium was divided in half with a barrier that isolated frogs on each side. All of the sides, artificial plants and rocks were colored brown on one side and green on the other side. After taking pictures of the frogs, three of them went into the brown side and the other three went into the green side. Pictures were taken of the frogs at three day intervals for eighteen days. The pictures were developed onto a CD. The computer program Adobe Photoshop was used to characterize the values for the cyan, red, yellow and black for each frog over time. The results were graphed for comparison.</p> <p><b>Results</b> The frogs in the brown environment turned brown and the ones in the green environment turned green. The frogs were light green when purchased. A short term and long term process of color change was observed. During the long term process, while in the tank, the frogs changed color to match their surroundings. The short term process was observed when they were taken out for pictures. All of the frogs started to turn brown when they were captured and handled.</p> <p><b>Conclusions/Discussion</b> This experiment was important because it demonstrated that these animals are capable of adapting to their environment. With this information the frogs and their habitats can be better managed to increase their chances of survival in the future.</p>	
<b>Summary Statement</b> This experiment determined that green tree frogs are capable of changing color to blend into their environment.	
<b>Help Received</b> This experiment determined that green tree frogs are capable of changing color to blend into their environment.	