



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> <b>Shannon N. Fine</b>	<b>Project Number</b> <b>S1002</b>
<b>Project Title</b> <b>The Habituation of Captive Orangutans to Novel Enrichment Item Placement</b>	
<b>Abstract</b> <b>Objectives/Goals</b> This study was done at the San Diego Zoo in San Diego, California on a total of seven individuals: two Bornean, four Sumatran, and one hybrid cross orangutans. Experiments were done to test the hypothesis that when enrichment items are placed in the same manner and location for periods of five to seven days they will cease to be novel and enriching for the animals <b>Methods/Materials</b> The group varied from two to four orangutans out per day, but there were always at least the same two orangutans out every day. The four orangutans who were regularly out in the same exhibit were observed. The browse was hidden in the same location, a place the orangutans could not initially see when they were let in to the enclosure. The orangutans were observed from the time they were let out in the morning until one showed interest in the mock termite mound which incorporates the use of the browse branches to extract the treat inside (usually honey, mustard, or some other soft food). Time was measured by the following: time began when the orangutans entered the exhibit; time was noted when the orangutans passed by or picked up the browse; time was recorded and stopped when an orangutan removed the browse from the location and transported it to another part of the exhibit. <b>Results</b> Over time the Orangutans habituated to the new location of browse placement. there was no difference between the first exposure of the scent enrichment to the second exposure after a week of no exposure. <b>Conclusions/Discussion</b> The data showed that as the days passed the orangutans spent less time interested in browse. The first day of both browse studies the orangutans immediately noticed that the browse was not in its usual place, and thus they began to search for it. The next day they checked where it had been the day before. In the following days the orangutan who initially found the browse acknowledged its presence but passed by it to find something more entertaining. T-tests comparing the time of acknowledgement of the browse and the time of removal of the browse showed with a 95% confidence level that there was a significant difference for the period of time in between the acknowledgement and removal of the browse. The first days were more enriching than the following because the novelty of the placement began to wear off over time.	
<b>Summary Statement</b> In order to determine if Pongo pygmeus pygmaeus and Pongo pygmaeus abeli habituate to the manner in which an enrichment item is presented, a group of Bornean and Sumatran orangutans were observed for many consecutive days at the San Diego	
<b>Help Received</b> The San Diego Zoo, Kathy Myers in setting me up with people, Kim Livingstone for coordinating everything, Cheri Davis and all the keepers for setting out the enrichment, Valerie Hare for information on enrichment.	