



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) John-Michael L. Jones	Project Number J1914
Project Title The Mantis Project 3: What Factor Is Critical for Success?	
Abstract Objectives/Goals The third year of this project sought to determine cause of the dismal results that were obtained last year trying to duplicate Matilda's performance. This study included wild caught praying mantises, hatchlings from Matilda's daughter, and hatchlings from a Norco female. My hypothesis was that temperature is the critical factor. This year consistent, sustained heat was added; results were documented and compared with previous years. Methods/Materials Materials: Various mantises, their environments: mostly separate, food sources, environments to attract or maintain the food sources, heat lamp and thermometer, etc.. Methods: Hatching season mostly outside, daily food collection and daily feeding. With colder weather move inside, add heat lamp to keep temperature 68-95°F. Record: hatch dates, final molt, death and egg laying dates. Results More mantises achieved adulthood. All females final molted normally and all but one laid normal egg cases. The egg-laying by all groups paralleled Matilda's, with shorter intervals. 6 females have laid over 80 egg cases so far. Early stage molting deformities corrected and feet regenerated on the youngest mantis. Conclusions/Discussion This study documented the heat requirement of the praying mantis <i>Iris oratoria</i> . With temperatures consistently above 80°F, the results demonstrated by Matilda were duplicated in all groups. Captive raised mantises responded the same as wild caught. My hypothesis was correct beyond expectations; temperature is the factor that is critical for success.	
Summary Statement This study documents the temperature requirement for successful egg laying by the praying mantis, <i>Iris oratoria</i> .	
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