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The Effect of Predominant Light on Coloration in the Chinese Praying Mantid *Tenodera aridifolia sinensis*

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Poster Presentation P49

**THE EFFECT OF PREDOMINANT LIGHT ON COLORATION IN THE CHINESE
PRAYING MANTID *TENODERA ARIDIFOLIA SINENSIS***

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Tenodera aridifolia sinensis, also known as the Chinese praying mantid, is an introduced species in North America. With no major predators, this insect has thrived and successfully incorporated itself into ecosystems throughout the Midwestern and Eastern United States. Juveniles of *T. aridifolia sinensis* are easy to rear in laboratory settings, making it an ideal insect for experimentation. Specimens of *T. aridifolia sinensis* have three predominant morphological patterns with respect to exoskeleton coloration; they are green, brown, or a mixture of the two. As such, these insects are usually found in habitats similar to their color (i.e., green mantids are found on leaves, brown ones on bark) (Prete 1999). In this study, we sought to determine whether mantid exoskeleton color is influenced by the predominating color of light in which they live. Approximately 100 nymphs of *T. aridifolia sinensis* were reared from birth, isolated in chambers with colored light (red, blue, green, and clear). All other environmental factors were standardized. Color was quantitatively assessed using a spectrophotometer to determine the concentration of the pigment Biliverdin IXa in each specimen. Biliverdin IXa is responsible for the green coloration in praying mantids (Rudiger 1968). Differences in color could be due to varying concentrations of this pigment resulting from the effect of predominant light.