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Elizabeth Elsasser
Illinois Wesleyan University

Given Harper, Faculty Advisor
Illinois Wesleyan University

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Poster Presentation 24

THE ROLE OF THE COMSTOCK-KELLOGG GLANDS IN EGG
TANNING IN *ROMALEA GUTTATA*

Elizabeth Elsasser and Given Harper*
Department of Biology, Illinois Wesleyan University

Freshly laid eggs of the Eastern Lubber grasshopper, *Romalea guttata*, are yellow and soft-shelled, but within several hours the eggs become hardened and dark brown. In a similar process, calyx and oviduct secretions, which form the egg pod, become frothy, darkened, hardened, and water insoluble during oviposition. It has been suggested that secretions from the paired Comstock-Kellogg glands accelerate tanning of both the eggs and egg pod foam. I investigated the effects of Comstock-Kellogg gland secretions on the rate of egg and egg pod tanning during egg pod production in the female Eastern Lubber grasshopper. Eggs streaked with CK gland secretions, macerated CK gland, macerated intersegmental membrane, or hemolymph took significantly less time to tan than eggs streaked with water or nothing. Females lacking CK glands laid eggs that took significantly longer to tan than eggs from sham-operated or unoperated females. These results suggest that the CK glands do serve to accelerate tanning, but the chemical composition of the CK secretions may be common to many grasshopper tissues.