



Apr 6th, 6:30 PM - 8:00 PM

Effective Copulation and Copulation Time on Female Reproductive Development in *Diabrotica vergifira*

David R. Sherwood
Illinois Wesleyan University

Bruce Criley, Faculty Advisor
Illinois Wesleyan University

Follow this and additional works at: <https://digitalcommons.iwu.edu/jwprc>

Sherwood, David R. and Criley, Faculty Advisor, Bruce, "Effective Copulation and Copulation Time on Female Reproductive Development in *Diabrotica vergifira*" (1990). *John Wesley Powell Student Research Conference*. 22.
<https://digitalcommons.iwu.edu/jwprc/1990/posters/22>

This is protected by copyright and/or related rights. It has been brought to you by Digital Commons @ IWU with permission from the rights-holder(s). You are free to use this material in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/ or on the work itself. This material has been accepted for inclusion by faculty at Illinois Wesleyan University. For more information, please contact digitalcommons@iwu.edu.

©Copyright is owned by the author of this document.

EFFECTIVE COPULATION AND COPULATION TIME ON FEMALE
REPRODUCTIVE DEVELOPMENT IN *Diabrotica virgifera*

David R. Sherwood, Dept. of Biology, IWU, Bruce Criley*

It has been established that the western corn rootworm (WCR--*Diabrotica virgifera*) requires a prolonged copulatory period of 3-4 hours for maximal insemination to occur. In addition, it has been suggested that mating speeds ovarian development in the WCR. This study was performed to determine the relationship between copulation and reproductive development in the SCR. Using 11-day post-emergence virgin WCR beetles, five groups of varying copulatory durations were established: (1) unmated; (2) 15 minutes in copula; (3) 1 hour in copula; (4) 2 hours in copula; and (5) mated until completion. The effects on reproductive development were examined utilizing the following criteria: reproductive status, size of ovaries, egg laying patterns and total female weight. The results suggest substantial increases in weight, ovarian status, ovarian size and frequency of egg laying with longer copulatory periods.