ENTOMOLOGY

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ABSTRACTS

A Survey of Mosquitoe Breeding Sites in Wayne County. LINDEN L. DUNCAN and HAROLD L. ZIMMACK, Department of Biology, Ball State University, Muncie, IN 47306.——Various types of mosquitoe larvae habitats, the species found at these sites, and the controls used against these sites will be presented.

Vector Competency of *Ixodes cookei* for Lyme Disease. TODD GLANCEY and ROBERT PINGER, Department of Physiology and Health Science, Ball State University, Muncie, IN 47306.——The etiologic agent of Lyme disease is the spirochete, *Borrelia burgdorferi*, which is transmitted by ticks in the genus *Ixodes*. *Ixodes dammini*, *I. pacificus*, and *I. ricinus* are proven vectors of Lyme disease. The capabilities of other tick species, such as *I. cookei*, in transmitting the spirochete are still uncertain. *I. cookei* was chosen to be used in a vector competency experiment because it is the most common *Ixodes* species encountered in Indiana and it has been a suspected vector in Canada. *I. dammini* was used as a control species. Larvae of each species were allowed to feed on hamsters infected with *B. burgdorferi*. Nymphs grown from these larvae were fed on uninfected hamsters fed upon by nymphs of *I. dammini* but not of the *I. cookei*.

Forensic Entomology in Indiana. NEAL H. HASKELL and LARRY W. BLEDSOE, Department of Entomology, Purdue University, West Lafayette, IN 47907.——The field of forensic entomology has had little exposure to the scientific community and even less to the general public, although symposia have been conducted at regional and national scientific meetings to introduce the complexities of this topic. The forensic entomologist is a member of the forensic science team. Other team members include: pathologists, crime scene technicians, odontologists, anthropologists, and botanists. Each member will collect the evidence necessary for their evaluation and consult with the other team members as to their conclusions. A consensus of opinion can then be reached as to the true sequence of events surrounding the case. Scentific research by the forensic entomologist is critical if the field is to continue to achieve the potential accuracy of the post-mortem interval estimations. Carrion models approximating human characteristics must be devised and investigated to evaluate studies focusing on fauna, habitat, and climate, on a regional geographic basis in the U.S. The public must be informed of the potential uses of forensic entomology in order for the benefits to be realized in the field.

The Appearance of Western Corn Rootworn Beetles, *Diabrotica virgifera virgifera*, on the Shores of Lake Michigan. KURT P. SEEVERS, R.H. GRANT, and

L.W. BLEDSOE, Dept. of Entomology, Purdue University, West Lafayette, IN 47907.——The annual occurence of western corn rootworm (wcr) beetles, *Diabrotica virgifera virgifera*, on the shores of Lake Michigan appears to be linked to weather and beetle behavior. Our research has shown that cold fronts are responsible for depositing the beetles on the lake surface and eventually on the beaches. Based on wind trajectory analysis, northwest Indiana is one likely source for the beetles. The majority of the beetles washed ashore are live females. Dissections have shown these beetles to have well developed fat bodies and to contain only moderately developed eggs. We believe that these females are making long duration preoviposition flights. Such flights have been described as an "oogenesis flight syndrome." Thus the wcr beetles seem to have evolved a propensity for long distance preovipositional flights that are aided by synoptic weather systems.