



### D13 What Does a Forensic Entomologist Really Do?

*Ralph E. Williams, PhD\*, Purdue University, Department of Entomology, 901 West State Street, West Lafayette, IN 47907*

After attending this presentation, attendees will be shown how forensic entomology is often used in forensic investigations, especially in death investigations. There have been some misunderstandings as to what a qualified forensic entomologist can actually provide. This presentation will spell out how forensic entomology contributes in the forensic investigation as to estimating the PMI and other aspects.

This presentation will impact the forensic community by providing the forensic community a clear understanding of the role and value that forensic entomology can provide in forensic investigations. A qualified forensic entomologist can play an important part of the investigation in helping to determine the PMI, habitat location, linking a suspect to the crime scene, and other aspects.

In defining what constitutes being a forensic entomologist it should first be understood the definition of the term forensic. The Webster Dictionary definition states "belonging to, used in, or suitable to courts of judicature or to public discussion and debate." In the broad sense then, a forensic entomologist deals with legal aspects in which insects may play a role. Death investigation, food contamination, wound invasion, civil suits/litigation involving insect nuisance complaints/infestation, among others, are situations in which a forensic entomologist may get involved.

In death investigations, the forensic entomologist can provide expertise in assessing the postmortem interval, possible site(s) of trauma, geographic location of death, toxicology of the decedent, and identity of the victim via DNA. These can be accomplished by a trained forensic entomologist because there is published information available as to the known succession of insect fauna on cadavers, known life histories of the most common forensically important species, and known geographical and climatic zones and conditions for various species.

With insects involved in food contamination, wound invasion, and civil/litigation cases, a forensic entomologist dealing in these areas has access to similar published information as to the insects that may be involved.

Discussion will focus on these areas that forensic entomologists may deal with and why they are asked by crime scene investigators, coroners, medical examiners, and attorneys to be involved and/or provide expert opinion on various cases.

#### **Forensic Entomology, Forensic Entomologist, Postmortem Interval**