



Pathology Biology Section – 2006

G52 Seasonal Effects on Blow Fly Species Composition and Behavior

Jennifer Y. Rosati, BSc, and Sherah L. VanLaerhoven, PhD, University of Windsor, Rm 119 Bio, 401 Sunset Avenue, Windsor, Ontario N9B 3P4, Canada*

After attending this presentation, attendees will learn about blowfly species and behavior and how it relates to decomposition and PMI determination.

This presentation will impact the forensic community and/or humanity by recognizing the importance regarding the effects of habitat and season on blowfly species composition and behavior.

Blowfly species composition is an important aspect to consider in the determination of the postmortem interval (PMI). Presented here are some preliminary results from the first year of a 2-year decomposition study. The effect of habitat (sun and shade) and season (spring, summer, and fall) on the successional patterns of carrion insects were investigated using the domestic pig. Each season, 2 freshly killed pigs (approximately 23kg) were placed in each habitat type in 6 test sites located throughout Windsor/Essex County, Ontario (n=12 pigs/season). Insects were sampled using a combination of pitfall and malaise traps as well as direct sampling. Internal carcass temperatures and ambient temperatures were recorded for each pig using Smartbutton data loggers and biomass loss was determined through weekly weighing. The effect of habitat and season can play a significant role in determining the species composition and successional patterns of the blowfly community. Observations and differences concerning maggot feeding and wandering behavior for each habitat and season were recorded. The research is currently on going with the second year beginning in April 2006.

Blowfly Species Composition, Blowfly Behavior, Habitat and Seasonal Effects