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Name: *Emily C. Pastula, BS, Michigan State University, Department of Entomology, 243 Natural Science Building, East Lansing, MI 48824; and Richard W. Merritt, PhD, Michigan State University, Department of Entomology, 243 Natural Science Building, East Lansing, MI 48824*

Title: Abstract for Insect Timing and Succession on Buried Carrion

Abstract: Abstract Burial is a popular technique chosen by assailants when looking to dispose of a body. Rarely are bodies buried very deep since digging requires a great amount of time and effort. The longer the assailant is in contact with the body, the more likely they are to be found with the body or leave evidence linking them to the crime. Therefore, assailants usually dig shallow graves to dispose of their victims with depths ranging between zero and three feet, the most common depth being two and half feet. A difference in the insect fauna has correspondingly been found when comparing exposed and buried carcasses, yet very little is known about when exactly these insects arrive. The time it takes insects to travel to carcasses at different depths has not been readily studied. It is also unclear how far insects are able to travel through the soil to colonize a carcass because most experiments only looked at a depth of one foot.

By increasing the frequency of sampling and placing out a large number of replicate pig carcasses (42), we hoped to narrow down the time range in which certain insects arrive at carcasses buried at one foot and two feet, with the bottom of the hole measuring the depth. A predetermined number of pig carcasses were exhumed after three, five, seven, fourteen, twenty-one, thirty, sixty, ninety, and one hundred twenty days. Insects were collected off of the carcass itself, as well as from the soil above the carcasses via excavating and sieving, and then placed in ethanol for later identification. We postulated that insects would be able to colonize a carcass at two feet, that it would take one week for insects to reach a depth of one foot, that it would take two weeks for insects to reach a depth of two feet, and that insect succession would progress similarly to exposed remains with fly larvae from the family *Calliporidae* being the first to colonize.

Student Biography: Emily Pastula is currently a second year master's student in the department of entomology at Michigan State University, with her primary focus being forensic entomology. She is working with Drs. Richard Merritt, Michael Kaufman, and Todd Fenton. She is a member of the Entomological Society of America, North American Forensic Entomology Association, and the American Academy of Forensic Sciences.