G51 The Decomposition of a Pig Carcass in a Mesophytic Biotope, Oahu, Hawaii

Anthony R. Russo, PhD, Chaminade University of Honolulu, Forensic Science, 3140 Waialae Avenue, Honolulu, HI 96816*

The goal of this presentation is to assist in the understanding of the stages of decomposition and the succession fauna on decomposing carcasses, an aid to estimation of postmortem interval.

This presentation will impact the forensic community and/or humanity by providing additional information confirming successional stages of decomposition and allied fauna.

The decomposition of an exposed pig carcass *(Sus scrofa)* was monitored for approximately 43 days. The carcass progressed through fresh (2 days), bloat (3 days), decay (5 days), post decay (30 days), and skeletal (2 days) stages and attracted suites of necrophagous species as well as predators, parasites and opportunistic feeders. The calliphorid blow flies *Chrysomya rufifacies* and *C. megacephala* were initial colonizers and made up the bulk of the initial arthropod abundance; the coleopterans of families Histeridae, Dermestidae, Trogidae, Staphylinidae, Tenebrionidae and Cleridae appeared in later stages. Most maggot activity occurred during the bloat and decay stage, which lasted from day 3 through day 9 of exposure. By this time only 25% of the carcass remained. During peak maggot activity, the difference between internal carcass temperature and ambient air temperature peaked. The greatest number of taxa (22 of 27) and the lowest total abundance of arthropods were observed during post decay. A total of 27 taxa were identified, of which about 64% were dipterans and coleopterans combined. The suite of arthropod taxa identified in this study was not significantly different from other outdoor pig decomposition studies done in Hawaii.

Arthropod Succession, Maggot Masses, Forensic Science

 ** Presenting Author*