



Pathology Biology Section – 2006

G72 Comparison of Early Decomposition Between Domestic Pig Carcasses Hanging and in Contact With the Ground on Oahu Island, Hawaii

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The goal of this presentation is to document the differences in early decompositional changes in carcasses that are in contact with the ground and hanging.

The patterns of decomposition observed in hangings are quite different from those observed for bodies in contact with the ground. This presentation will impact the forensic community and/or humanity by demonstrating how the accurate estimation of the postmortem interval is dependent on an understanding of these differences in insect invasions, temperature generation, and biomass removal.

This study was conducted on the campus of Chaminade University on the island of Oahu, Hawaii. Carcasses of two domestic pigs, *Sus scrofa* L., were used. One carcass was placed in contact the ground on a wire mesh platform and the other suspended from a tree, not in contact with the ground. Carcasses were observed twice daily for a period of two weeks. Weights were recorded daily using a hand-held scale to determine rate of biomass removal. Internal temperatures were recorded using telethermometer probes of the mouth, abdomen, and anus. Ambient temperatures were recorded at each visit. During the study period, both carcasses passed through four of the five stages of decomposition established by Goff (1993): Fresh, Bloated, Decay, and Post decay. The skeletal stage was not reached during this study. Differences in decomposition patterns were noted between the two carcasses. The hanging carcass demonstrated an initial rate of biomass loss greater than the carcass on the ground. After the first week, the rate became more equal. Internal mouth temperatures for the pig on the ground were uniformly higher than for the hanging carcasses, probably due to the mediating effect of the air. Abdominal temperatures, as well as anal temperatures were more similar, although still higher for the carcass on the ground.

Decomposition, Temperature, Biomass Removal