

4th International Conference on

Forensic Research & Technology

September 28-30, 2015 Atlanta, USA

A novel scale of time since death estimation for use by forensic investigators

Stephanie Giles

Thames Valley Police, UK

Forensic taphonomic studies conducted at decomposition research facilities such as the Forensic Anthropology Research Facility (the “Body Farm”) at the University of Tennessee, Knoxville have aided forensic anthropologists to develop post-mortem interval (PMI) estimation methods such as Megyesi’s (2005) point-scoring decomposition scale. However, such methods have limited use for forensic investigators who operationally encounter early to moderately decomposed remains. This paper demonstrates that the absence of adequate PMI estimation tools in the death investigation field can lead to inaccurate PMI estimations. By interrogation of 128 decomposition cases, photographs and associated death investigation reports from the Allegheny County Medical Examiner’s Office in Pittsburgh, a novel scale of PMI estimation was developed using rigorous statistics. The resulting Giles-Harrison (G-H) decomposition scale was subsequently compared with Megyesi’s method in a blind trial utilising 10 human cadavers at the Forensic Anthropology Research Facility, University of Tennessee. Preliminary findings suggest that the G-H scale was more accurate at estimating the PMI experimentally and allows forensic investigators to make a quick and reasoned PMI estimation operationally.

Biography

Stephanie Giles is a Crime Scene Investigator for Thames Valley Police, the largest non-metropolitan police force in the UK and a part-time Forensic Anthropology PhD student at Cranfield University, Defence Academy of the United Kingdom. She has been an operational Crime Scene Investigator since February 2014 and has so far examined approximately 400 crime scenes. She holds an MSc in Forensic Anthropology and Archaeology and a First Class BSc in Medical Sciences from the University of Leeds. During her MSc, she secured a research scholarship at the Anthropology Research Facility (“The Body Farm”), Knoxville, University of Tennessee. Here she developed a new method to estimate the time since death from decomposition states and conducted research utilising the William Bass Skeletal Collection. Following her Master’s, she was awarded the “Forensic Science Society Prize”, “Head of School Prize”, “Inforce Prize”, “Top Student on the Forensic Programme Award” and the “Cranfield Forensic Institute Distinction Prize”.

S.B.Giles@cranfield.ac.uk

Notes: