H137 Relocation of Remains: Scavenger Scatter Patterns in Central Oklahoma

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After attending this presentation, attendees will gain a better understanding of how scavengers disperse remains and the predictable patterns related to those behaviors, as well as key indicators of directionality of dispersal and exposure time, which will aid them in more successful search for and recovery of human remains which are left exposed at the surface level.

This presentation will impact the forensic science community by improving search and recovery techniques, increasing percentage of remains recovered, increasing identifications of remains, closing cases, and bringing closure to families and the community.

There are many instances annually where human remains are left exposed, due to a variety of situations deriving from accidents, suicide, and homicide. In these instances, the likelihood of scavenging of the remains is high. Scavenging results in the scatter of remains from the original deposition site, and in some instances this can cover a vast area, depending on species, terrain, and season, adding difficulty to search efforts. Patterns in this dispersal have been noted in few case studies as well as experimental cases. This study hypothesizes that this dispersal is highly patterned and predictable based on a series of multi-seasonal experiments where remains were constantly monitored and tracked in an accurately measurable way.

This study utilized wildlife radio transmitters in a novel and unique way, implanting them inside medullary cavities of long bones, attaching them to the surface of the pelvis, and implanting them within the crania of domestic pig carcasses which were left exposed. These skeletal elements were then able to be tracked over time, revealing the direction, movement, and final resting places of those skeletal elements throughout the decomposition and scavenging process. This allowed for the first time for typically lost skeletal elements to be followed and mapped from deposition day throughout the entire processes of decomposition and scavenger consumption. From the data collected, a pattern of use of the area by wildlife and subsequently pattern of maximum dispersal was observed.

This experiment was repeated several times over several seasons making the information in this presentation highly scientifically valid and vastly useful to the forensic science community in areas with similar ecologies and wildlife. The data collected over the four sets of experiments and the implications of that data and application in the field will be presented.

Scavenging, Skeletal Remains, Recovery Technique

 ** Presenting Author*