

JONATHAN PRINCE & KRISTY HENSON, Department of Natural Science, Forensic Science Program, Fairmont State University, Fairmont, WV, 26554. Skeletal weathering on remains frozen for different time intervals update.

When an individual is frozen after death post-mortem interval data can be misleading. The decomposition process is affected and accurate time of death reading is unlikely. Many medical examiners rely on soft tissue temperatures or stage of decomposition to determine when someone died and this information can be altered when freezing a body. The objective of this study was to examine skeletal weathering patterns that result from being frozen allowing us to develop a time interval scale to determine how long a body was frozen. A sample of mammalian long bones (arms and legs) and flat bones (ribs) were placed in a -20°C standard deep freezer within four hours of death. The long and flat bones were frozen for two weeks, one month, two months, and three months. After freezing the bones were thawed, flensed, and placed in a demisted beetle tank to remove all soft tissue. When the soft tissue was removed bones were placed in a soapy ammonia bath to kill the beetles and allow for a detailed skeletal analysis. Preliminary results show no skeletal weathering on flat bones frozen up to 3 months and sufficient longitudinal fracturing on long bones frozen for three months. Unknown frozen long bones were examined for comparison to the found data. *This research was made possible by NASA West Virginia Space Grant Consortium, Training Grant #NNX15AI01H*