

SERENITY PARSELL, Department of Forensic Science, Fairmont State University, Fairmont, WV, 26554 and KRISTY HENSON, Department of Forensic Science, Fairmont State University, Fairmont, WV, 26554. Assessing the interactions of variables affecting the rate of nonhuman decomposition.

Decomposition of organic tissue is a complex process that is affected by a large number of interactions. These variables affect the rate of decomposition, insect activity, and the onset of each individual stage in the decomposition process. Of the variables in effect, some of the most commonly studied are temperature and moisture. The purpose of this study is to analyze the impact of other variables, such as age at death, body size, sun exposure, and presence of preservation chemicals on the rate of decomposition in nonhuman specimens. The goal of this research is to give more insight into the complex interactions between these variables and analyze the reliability of current decomposition analysis. As ethical considerations and policies affect how researchers use human remains, more decomposition research is needed to better understand this very sensitive process and all the variables that are included. Preliminary results suggest that sun exposure, relative body size, and age at death do not significantly affect the rate of nonhuman decomposition, but a principal component analysis suggests correlation does exist between subsets of these variables. Ongoing work to include larger sample sizes, as well as chemically preserved animals, is currently running. Expected results indicate that preserved animals will take longer to fully decompose, and the effects of age, sun exposure, and body size will not be significant.