

ESTIMATING THE MINIMUM NUMBER OF INDIVIDUALS IN THE 16TH-CENTURY CE MASS GRAVE 3 AT THE MOHACS NATIONAL MEMORIAL SITE – METHODOLOGICAL CHALLENGES AND PROPOSED MODIFICATIONS FOR THE ANALYSIS OF LOWER LIMB BONES

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Background: Mass grave analysis presents major challenges, particularly in identifying skeletal elements and estimating the minimum number of individuals (MNI) in commingled assemblages. While landmark- and zonation-based methods are widely used, their performance varies with fragmentation and preservation. We are investigating mass grave 3 (MGN3) at the Mohacs National Memorial Site, linked to the Battle of Mohacs (1526). The grave contains the partially commingled remains of approximately 300 individuals, including articulated skeletons, isolated bones, and thousands of fragments, providing an exceptional case study for evaluating MNI estimation methods under different preservation conditions.

Objective: Our research aims to assess the applicability of landmark- and zonation-based methods to lower limb bones and to establish a methodological framework for MNI estimation. Both methods were applied systematically to complete skeletons, isolated elements, and fragmented lower limb bones recovered from MGN3.

Results: Preliminary results showed no significant difference between the numbers of identified small and large lower limb elements, supporting the interpretation of MGN3 as a primary burial. However, identification and scoring success varied considerably with bone preservation and fragmentation. The hip bone, for example, was almost always fragmented to some degree. These observations prompted proposed modifications.

Conclusions: Our findings highlight the importance of adapting standard MNI estimation methods to the preservation characteristics of individual assemblages. Such refinements improve both the applicability and the accuracy of MNI estimation, thereby enhancing the anthropological investigation of large, partially commingled burial contexts.

Keywords: Mohacs battle; Commingled skeletal remains; Minimum number of individuals; Biological anthropology.

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