



## Physical Anthropology Section – 2007

### H41 Matjes River Rockshelter: A Case of Commingled Remains

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After attending this presentation, attendees will have alternative ideas for researching forensic problems on existing skeletal collections, gain insight into one approach to sorting and documenting cases of large scale commingling, and learn about the basic demography of the Matjes River skeletal collection.

This presentation will impact the forensic community and/or humanity by providing a better understanding of sorting such remains in a forensic context. This study benefits both physical and forensic anthropologists in that it presents alternative sources for researching current problems and demonstrates what can be achieved from human remains when modern techniques, such as DNA, are not available. For local archaeologists, the results will help in understanding the human side to the cultural remains found on the site.

The sorting of commingled remains is not an uncommon practice in South Africa, where several forensic cases have been known to contain more than one person. The greatest number of skeletal remains from a single forensic case has come from the town of Duiwelskloof, in which the disarticulated bones of 11 people were packed into a grain bag and discarded in the forest. This case brought about an interest in exploring various anthropological methodologies in sorting human remains and how they could be applied in a situation where the outcome of a court case was not dependent on the result of the study.

Between 1932 and 1956, one of the largest collections of human remains was removed from the Matjes River Rockshelter, which dates from 3,000 to 10,000 BP. However, the methodologies used to excavate these skeletons were less than adequate. After removal, the bones were stored by skeletal element and hence, commingled. This afforded an opportunity to test various approaches to sort the remains into individuals and, at the same time, the demographics (sex and age) of the commingled group in question could be described.

The first phase of the study was to determine the extent of the collection, the minimum number of individuals (MNI) as well as to provide an estimation of age and sex for the remains. Each box of bones in the collection and each possible individual in a box was assigned a unique number and photographed. All bones were counted and the most common skeletal elements were selected to establish an MNI. In the skull, the most numerous were the right parietal and the left mandible with 80 and 71 unique pieces, respectively. A similar pattern was observed in the upper limbs with 115 left humeri, 95 left radii, and 119 left ulnae. No less than 50 persons were recorded from the lower limbs. Approximately, 27 females, 27 males and 17 persons of indeterminate sex were recorded. Of

these 39 were adults, 27 juveniles and 5 of indeterminate age. As skeletal elements are paired with each other, it is expected that the estimation of age and sex will change. In conclusion, it is possible to say that the Matjes River skeletal collection contains at least 100 people; future research will focus on developing techniques in which various skeletal elements can be sorted to specific individuals.

Studies on commingled skeletal collections will serve to provide a better understanding of sorting such remains in a forensic context. This study benefits both physical and forensic anthropologists in that it presents alternative sources for researching current problems and demonstrates what can be achieved from human remains when modern techniques, such as DNA, are not available. For local archaeologists, the results will help in understanding the human side to the cultural remains found on the site.

**Skeletons, Research Collections, Commingled Remains**