



Physical Anthropology Section – 2003

H20 The Influence of Large-Scale DNA Testing on the Traditional Anthropological Approach to Human Identification: The Experience in Bosnia and Herzegovina

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The purpose of this presentation is to review the impact of large-scale DNA testing on the practice of forensic anthropology in Bosnia and Herzegovina. The attendee will learn about the approaches adapted by forensic anthropologists in this region as they gain “instant feedback” from the DNA results and use the information to refine their techniques.

The identification of the mortal remains of thousands of individuals who disappeared during the 1992-1995 war in Bosnia and Herzegovina (BiH) represents the most ambitious project of its kind. Since its creation in 1996, the International Commission on Missing Persons (ICMP) has worked in close cooperation with local commissions established in the Bosnian Federation and the Serbian Republic of Bosnia to recover and identify the missing, and bring closure for the loved ones of the missing.

A large database for mortal remains recovered from mass graves and other sites has been created using traditional approaches in anthropology, pathology, and police investigations. However, despite the fact that thousands of remains have been recovered since 1996, and intensive efforts to identify these persons have been attempted, only a limited number of positive (as opposed to circumstantial) identifications had been achieved until recently. As ICMP DNA laboratories became fully operational in 2002, the sudden increase in DNA matches leading to positive identifications has created new roles and opportunities for forensic anthropologists.

One misconception regarding DNA-led identifications is that once a DNA match is made, then a positive identification automatically follows. This is far from true: it is imperative that traditional forensic scientists review the tentatively identified remains and related evidence to ensure that the match is valid. With large-scale DNA matching for skeletal remains, the anthropologist receives a wealth of feedback on many cases in a short period. In reviewing the DNA evidence along with the biological profile (age, sex, stature, etc.) generated during the postmortem examination, the anthropologist is also receiving feedback on his or her own abilities to assess the human skeleton. This allows for improving one's skills in creating biological profiles, but appropriate measures must be in place to ensure that circular reasoning and unconscious bias are eliminated. This is particularly important for age-at-death assessments, which can be highly subjective. By having more than one forensic expert review each case and by using multiple lines of evidence, proper safeguards are introduced to ensure that the traditional forensic techniques and the DNA results are properly integrated to ensure the highest degree of confidence in the identification process.

Forensic Anthropology, Human Identification, DNA