THE ROLE OF DNA TESTING IN THE IDENTIFICATION OF THE MISSING IN THE FORMER YUGOSLAVIA

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Armed conflicts that accompanied the breakup of the former Yugoslavia in the 1990s led to the deaths of an estimated 300,000 individuals, of which up to 40,000 remained unaccounted for at the beginning of 2000. The uncertainty surrounding the fate of so many acted as a destabilizing factor to newly emerging democracies and presented a massive identification challenge. In the majority of cases, medical and dental records were incomplete, missing, or destroyed and, by the year 2000, almost all bodies being recovered were skeletonized. These conditions combined to make the identification of the missing one of the greatest of forensic challenges.

The International Commission on Missing Persons (ICMP) was created in 1996 at the behest of then US President Bill Clinton during the G-7 conference in Lyon, France and tasked with assisting in determining the fate of those still missing. By the year 2000 it had become apparent that traditional forensic techniques would not be able to identify most of the skeletonized bodies being recovered and that new approaches to the identification problem would need to be developed. It was this need to return the identity to these bodies that served as the impetus behind the creation of a regional DNA system.

In order for DNA testing to aid in the identification of tens of thousands of sets of human remains, the ICMP developed both blood collection centers where families who are missing loved ones could donate blood samples as well as four regional DNA laboratories. The first blood sample was collected in June of 2000 and by June of 2003 more than 48,000 blood samples had been collected, representing more than 21,000 of the missing. The first ICMP DNA laboratory became operational in May of 2001. By the end of 2002, the fourth and final ICMP DNA laboratory came on-line. These four DNA laboratories form an integrated DNA system and must work together to bring answers to the families of the missing.

In the context of the identifications of the missing from Bosnia and Herzegovina, virtually all recovered bodies undergo DNA testing. Once a DNA match between family donors and a skeletal element has been confirmed, a DNA report is generated and submitted to the person in charge of making an official identification and of closing the case. It is this expert who is responsible for combining all other forms of identification evidence to confirm the lead that the DNA testing has produced. In this manner, DNA testing leads the identification effort with traditional forensic evidence used as confirmation, thus reversing the usual roles of traditional and DNA evidence.

The first in-country DNA match in Bosnia and Herzegovina was realized on November 16, 2001. For the next several months, a few dozen DNA matches were produced on a monthly basis. However, as the size of the family reference database grew and as the DNA laboratories increased their testing capacity, the rate of DNA report generation increased. By the end of 2002 the rate of DNA report generation had grown to 300 – 400 per month and exceeded the 400 per month level by July of 2003. This significant rate of successful DNA testing has had a regional, national, and international impact and has also shown a new and expanded role for the use of DNA testing in the identification the missing.