



gradually being unlocked as part of an on-going research project

The secrets hidden within Winchester Cathedral's mortuary chests are gradually being unlocked as part of an on-going research project supported by the Dean and Chapter of Winchester Cathedral.

It has long been believed that the six mortuary chests contain the mortal remains of pre-Conquest kings and bishops, but for many years this has merely been the subject of speculation. The bones had been co-mingled over the centuries and it was clear that the chests did not contain whole skeletons.

The conservation of the mortuary chests, which began in 2012, provided an opportunity for the scientific analysis of the contents for the first time. A major development in 2015 revealed that the bones were from the late Anglo-Saxon and early Norman periods, thanks to radiocarbon (C14) dating on selected fragments by the Radiocarbon Accelerator Unit at the University of Oxford. These findings confirmed that the bones date from the same periods as the names on the chests, which include eight kings, two bishops and one queen, rather than being the result of later activity within the Cathedral.

Since 2015, a team of biological anthropologists at the University of Bristol have continued working on the project to assess the likelihood of whether the human remains in the chests relate to the historical burial records. This process involves recording the contents of the chests and determining the number of individuals represented, along with their sex, age at death and physical characteristics. Whilst still on-going, this second phase of the project has already unearthed some fascinating and surprising results.



Working in the Lady Chapel at Winchester Cathedral, which became a temporary laboratory, the researchers reassembled over 1,300 human bones, with the aim of restoring the identity of the kings, one queen, and several bishops traditionally thought to be within the chests. Each bone has been carefully measured and recorded, and at least twenty three partial skeletons have been reconstructed, a remarkable finding in itself since it was originally believed that the mortuary chests contained the remains of no more than fifteen people.

The results of the radiocarbon dating were calibrated by estimating the 'marine reservoir' effect for each sample, since high status individuals ate large quantities of fish from the rivers and the sea which contain older radiocarbon. The age of the individuals was also determined by dental formation and attrition, changes to the bone surfaces and the closure of the cranial (skull) sutures. The skeletons were reassembled on the basis of bone appearance and the estimated size and age of the individuals.

The ability to identify the sex, age and physical characteristics of these individuals has resulted in some exciting discoveries, including the remains of a mature female dispersed within several chests. It is not yet certain, but these bodily remains could be those of Queen Emma, daughter of Richard I, Duke of Normandy, the wife of two successive Kings of England, Ethelred and Cnut, and the mother of King Edward the Confessor and King Hardacnut. She was a powerful political figure in late Saxon England, and her family ties provided William the Conqueror with a measure of justification for his claim to the English throne.

Completely unexpected was the discovery of two juvenile skeletons, adolescent boys who had died between the ages of 10 to 15 years in the mid-11th to late 12th-century. Their presence in the chests was not recorded and their identity is still unknown, but they were almost certainly of royal blood.

'We cannot be certain of the identity of each individual yet, but we are certain that this is a very special assemblage of bones' commented Professor Kate Robson Brown, who led the investigation.

The continuing research is deepening our understanding of the early Anglo-Saxon kings and queens of England, and visitors can find out more about the project from 21 May when Winchester Cathedral launches its landmark National Lottery Funded exhibition [Kings and Scribes: The Birth of a Nation](#). The bones of the female skeleton have been 3D printed and laid out as a key exhibit in the exhibition.

More exciting developments will be revealed over time as the investigation to identify the individuals in the chests continues. These discoveries could place Winchester Cathedral at the birth of our nation and establish it as the first formal royal mausoleum.

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