Blended families existed in the Neolithic age, say Harvard scientists

Max Stephens - 22 Dec 2021

Blended families existed in the Neolithic Age, scientists from Harvard University have revealed, after mapping the “world's oldest family tree” from a burial site in the Cotswolds.
An international team of archaeologists and geneticists analysed DNA extracted from the bones and teeth of 35 men, women and children found buried together in the 5,500-year-old tomb near Cheltenham.

Researchers discovered that 27 of the people entombed in the Hazleton North long cairn, who lived between 3700 and 3600 BC, belonged to five continuous generations from a single extended family.

They also found three of the males had been buried alongside their biological mothers but not their fathers, indicating they were “stepsons” adopted into the family.

The team – which included archaeologists from Newcastle University and geneticists from the University of the Basque Country, University of Vienna and Harvard University – said it is the first study in the world to reveal in detail how prehistoric families were structured.

Archaeologists had first excavated the site in a four-year-long project between 1979 to 1982 after surveys showed it was being damaged by ploughing from farmers.

Alan Saville, the late executive of the European Association of Archaeologists who led the original excavation, described the tomb as a “truly remarkable survival of ancient architecture”.

It is currently listed as a scheduled monument on the National Heritage List for England.
Blended families existed in the Neolithic age, say Harvard scientists. The site belongs to a series of long barrows, known as the Cotswold-Severn group, built during the Early Neolithic era, 200 of which have been recorded so far.

However, it was not until rapid advances in DNA technology made over the past three years that scientists were able to match the ancient remains with buried relatives.

The findings, published in the journal Nature, found that most of those buried in the tomb were descended from four women who all had children with the same man.

‘We have to keep an open mind’

Although two of the daughters of the lineage who died in childhood were buried in the tomb, the absence of adult daughters suggests that their remains were placed either in the tombs of male partners or elsewhere, they said.

Dr Chris Fowler, a senior lecturer in Later Prehistoric Archaeology at Newcastle University and the lead archaeological author of the study said it “gives us an unprecedented insight into kinship in a Neolithic community”.

“When we are trying to interpret what was going on in past communities, we have to keep an open mind and look at what the evidence suggests to us about what those connections were.”

The team also found no evidence that another eight individuals were biological relatives of those in the family tree, which might further suggest that biological relatedness was not the only criteria to be buried together.

Iñigo Olalde from the University of the Basque Country and Ikerbasque and lead geneticist for the study, said: “The excellent DNA preservation at the tomb and the use of the latest technologies in ancient DNA recovery and analysis allowed us to uncover the oldest family tree ever reconstructed and analyse it to
Blended families existed in the Neolithic age, say Harvard scientists understand something profound about the social structure of these ancient groups."

David Reich at Harvard University, whose laboratory led the ancient DNA generation, added: “This study reflects what I think is the future of ancient DNA: one in which archaeologists are able to apply ancient DNA analysis at sufficiently high resolution to address the questions that truly matter to archaeologists.”

Ron Pinhasi, of the University of Vienna, commented: “It was difficult to imagine just a few years ago that we would ever know about Neolithic kinship structures. But this is just the beginning and no doubt there is a lot more to be discovered from other sites in Britain, Atlantic France and other regions.”