

Discovery of stalagmites, burned bones provides insights into pre-modern Neanderthal culture

Tens of thousands of years ago the last passable entrance to the Bruniquel Cave in Southern France was sealed off by a rock slide or flood. It remained shut until the late 1990's when a 15-year-old boy and his father, a local caver, decided to excavate.

Deep inside the cave, they found a collection of hundreds of broken stalagmites arranged in piles and circles, burned bones, and evidence of fire.

Initial estimates claimed that the find was about 45,000 years old. At that age, only Neanderthals lived in Southern France. A new estimate, based on more sophisticated dating methods, suggests the structures were built more than [175,000 years ago](#), making this the oldest and most surprising finding from the Neanderthal time period. The stalagmite circles are evidence of a sophisticated culture, one that worked together to move and arrange tons of rock into formation and had one that had mastered use of fire and deep cave exploration. From [Ed Yong at the Atlantic](#):

The discovery suggested that Neanderthals were more sophisticated than anyone had given them credit for. They wielded fire, ventured deep underground, and shaped the subterranean rock into complex constructions. Perhaps they even carried out rituals; after all, there was no evidence that anyone actually lived in the cave, so what else were the rings and mounds for?

The study's authors suggested that this might have been the site of 'symbolic or ritualistic behaviors.' The Neanderthals set fires on top of some of the piles of stalagmites they created. They broke off 400 stalagmites, the tower-like structures that grow up from the cave floor, and arranged them in piles and circles. They burned animal bones on site or brought them into the ritual space. In total Neanderthals moved more than 2.2 tons of cave calcite to build the structures. That is a level of social organization more complex than was previously thought for Neanderthals, and at a much earlier date than other evidence of Neanderthal culture. From [Annalee Newitz at ARS Technica](#):

What makes this site so extraordinary isn't just its great age, but the certainty that it was made by Neanderthals whose culture had not yet been changed by modern humans. This structure represents pure Neanderthal expression. It supports the theory that human culture and symbolism emerged in different populations all over the world throughout the past 200 thousand years. Though modern humans from Africa came to dominate the world after they crossed into Eurasia about 80 thousand years ago, evidence from Bruniquel Cave suggests that people outside Africa were developing their own symbolic systems, too.

The Neanderthals that built this site worked together in groups, explored deep into caves and mastered fire to light their way. And as the archaeologists suggest in their study, these early humans had moved beyond meeting immediate needs of food and shelter to create expressions of symbolism and ritual. All

about 50,000 years before homo sapiens began migrating out of Africa.

If Neanderthals developed a rich cultural experience without contact with modern homo sapiens we need to revise the public perception of this early human group [writes Ed Yong](#):

These discoveries are part of the Neanderthals' ongoing rehabilitation. Since their discovery, scientists have tried to understand why they died out and we did not, with the implicit assumption that they were inferior in some important way. Indeed, to describe someone as a Neanderthal today is to accuse them of unsophisticated brutishness.

Indeed, its important to remember that for the majority of human existence, there were several different groups, including our own *Homo sapiens* on the earth. Those brutes were our colleagues for the majority of human existence. For tens of thousands of those years we were constantly [breeding with each other](#). As we discover, date and genetically analyze more samples we find more and more evidence of that. "The family history of modern humans and their cousins has grown tangled," writes [Ann Gibbons in Science](#) earlier this year.

The discovery of a more ancient Neanderthal culture makes our early hominid story even more intriguing. We can no longer blame lack of culture or society as a reason for the Neanderthals died off. Whatever happened between our species and theirs, we were certainly more similar in our capacity for culture than originally thought.

Meredith Knight is a contributor to the human genetics section for Genetic Literacy Project and a freelance science and health writer in Austin, Texas. Follow her [@meremereknight](#).