**Ancient cave art could be Neanderthal's**

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Could these be stencils of Neanderthal hands? *(Source: Pedro Saura)*

Neanderthal art? Researchers have found cave paintings in Spain that are up to 40,000 years old, suggesting they might have been created by Neanderthals.

Dr Alistair Pike, of the [University of Bristol](http://www.bristol.ac.uk/), and colleagues, publish their research in the journal [*Science*](http://dx.doi.org/10.1126/science.1219957).

The practice of art is considered an important stage in the development of human cognition, along with the use of symbols, and possibly language.

But determining the age of cave art has often been difficult, especially using radiocarbon dating.

Pike and colleagues instead used a technique called uranium-thorium dating to find out the minimum age of calcite deposits overlying art in 11 different caves in northern Spain.

Among the 50 paintings studied, the researchers found a 40,800-year-old disc, a 37,000-year-old hand stencil and a 35,600-year-old club-shaped symbol.

As well as giving insight into how painting styles changed over time, the findings suggest cave painting in Europe started 5000 to 10,000 years earlier than previously thought.

This is at the same time that modern humans were arriving in Europe and Neanderthals were dying out.

Pike says either modern humans arrived already painting or they developed the skill once they arrived - as part of cultural innovation triggered by competition with Neanderthals.

"Alternatively, cave painting started before the arrival of modern humans, and was done by Neanderthals," says Pike.

"That would be a fantastic find as it would mean the hand stencils on the walls of the caves are outlines of Neanderthals' hands, but we will need to date more examples to see if this is the case."

The artwork was found in an area that includes the UNESCO World Heritage sites of Altamira, El Castillo and Tito Bustillo.

**"Useful contribution"**

Australian archaeologist Dr Iain Davidson who has also dated cave art in Spain welcomes the new research.

"It's a really useful contribution," says Davidson, an emeritus professor at the University of New England.

He points to two other findings since this paper was accepted for publication that push back the date for art in caves in Europe.

Earlier this year publications reported the engraving of female genitalia dated at around 37,000 years and the discovery of flutes made from bone and ivory dated at around 40,000 years.

"We now have dates of around 40,000 in three parts of Europe for things that would be called 'art' in general," says Davidson.

He says the lack of good skeletal remains from around that time in Europe mean it is difficult to know who is actually responsible for the artwork found there.

But, Davidson says the latest evidence calls for a rethink of the traditional view that Neanderthals could not possibly have had the cognitive abilities of modern humans - a view that he himself has held for a long time.

"I think I was wrong," says Davidson.

"There does seem to be tenuous evidence that Neanderthals were experimenting with pigment. There is slightly plausible evidence that they were creating objects out of bone. All of this suggests they had something like the abilities that modern humans have."

Davidson says the question of whether Neanderthals had similar cognitive abilities raises the difficult question of how that came about.

Genetic evidence suggests the ancestors of modern humans and Neanderthals diverged 400,000 years ago and didn't interbreed, he says.

So, how would Neanderthals and modern humans both have developed the same cognitive abilities?

Either they evolved independently the same abilities under different selective pressures, says Davidson, or they did in fact interbred with each other to transfer genetically-determined traits.

http://www.abc.net.au/science/articles/2012/06/15/3523654.htm