

# Wind and insect patterns dispel myth of 'finer feelings' in Neanderthal burial rituals

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Research from academics at Liverpool John Moores University (LJMU) could dispel myths that our Neanderthal ancestors buried flowers with their dead 60,000 years ago.

It was previously thought some of the Neanderthal skeletons in Shanidar Cave in Iraq were intentionally buried and the great French [pollen](#) analyst Josette Leroi-Gourhan detected clumps of pollen in the grave fill of one skeleton, leading to the story of the 'Shanidar Flower Children'.

The pollen came from [wild flowers](#) known to have medicinal activity and she thought that the Neanderthals had buried flowers with the body of one of their [group members](#).

At the time Neanderthals were not thought to have had human feelings and so Leroi-Gourhan's findings hugely altered the way people thought about these, our near relatives. Later, the findings were widely questioned, but since the 1950s no-one has been able to get back to the cave to check this highly controversial story, until now.

Marta Fiacconi and Dr Chris Hunt from the School of Natural Sciences & Psychology at LJMU were able to start fieldwork at Shanidar, funded by the Leverhulme Trust, with the support of the Antiquities Service of the Kurdish Regional Government. The project is led by Graeme Barker of the University of Cambridge. Their initial work was to sample the pollen fallout in the surface layers in the cave.

Their results show that pollen accumulates today in the cave by a combination of wind and insect activity. Clumps of pollen similar to those found by Leroi-Gourhan are present and are most likely the result of the activities of bees. The doubters were probably correct: natural causes most probably explain Leroi-Gourhan's findings and the pollen clumps cannot be used as evidence for finer feelings in Neanderthals.

Marta Fiacconi explains:

"Pollen is produced by male plants for reproduction and it is dispersed through wind or animals in order to reach the female plants. Most of the pollen grains don't reach plants and they accumulate on the soil. Some become buried and may last for thousands of years. Each type is distinctive and we can recognise them with a high-powered microscope. By analysing the pollen in sediment layers in a cave it is therefore possible to reconstruct ancient vegetation and from that the climate in a particular area. The study of the present-day pollen allows us to understand the mechanisms acting in the past and to go back in time picturing how the landscape and the environment was then. This is vital for understanding the lives of early people."

Dr Chris Hunt comments:

"This might seem to be the end of a lovely story, but since Leroi-Gourhan's work researchers have learned much more about the Neanderthals. It is known that some of our ancestors interbred with Neanderthals because their DNA is present in the modern human genome. Archaeologists have discovered that some Neanderthals seem to have used personal ornaments – a sort of prehistoric 'bling'. We have been excavating at Shanidar with our colleagues from the Kurdistan Antiquities Service this autumn and the project will be announcing new findings once the scientific work is completed. The story is not over!"

**More information:** Marta Fiacconi et al. "Pollen taphonomy at Shanidar Cave (Kurdish Iraq): An initial evaluation," *Review of Palaeobotany and Palynology* (2015). [DOI: 10.1016/j.revpalbo.2015.09.003](https://doi.org/10.1016/j.revpalbo.2015.09.003)

Provided by Liverpool John Moores University

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